



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 166038

TO: Ben Sackey
Location: 5b31 / 5c18
Art Unit: 1626
Monday, September 19, 2005

Case Serial Number: 10/618744

From: Noble Jarrell
Location: Biotech-Chem Library
Rem 1B71
Phone: 272-2556

Noble.jarrell@uspto.gov

Search Notes



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SEARCH REQUEST FORM

Requester's Full Name: BEN SACKETT Examiner #: 73489 Date: 9/16/95
Art Unit: 1626 Phone Number: 2-0704 Serial Number: 101618244
Location (Bldg/Room#): REM 583 Mailbox #: 5C18 Results Format Preferred (circle): PAPER DISK

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

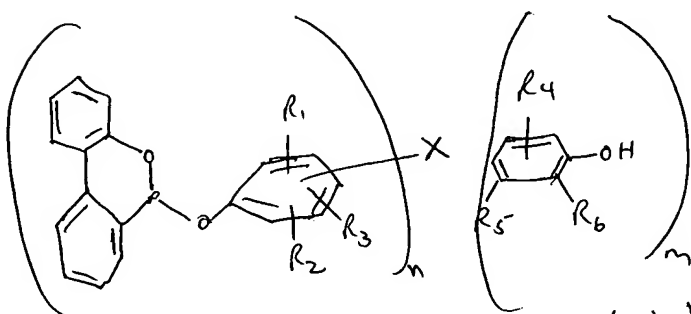
Title of Invention: Phenolic group-Containing phosphonite Copolymers for
Inventors (please provide full names): Erica Lin et al. making same

Earliest Priority Date: _____

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the chemical species or structures, keywords, synonyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.



$R^1 - R^6$ are as defined in claim 1

X is as defined

when $n + m \rightarrow 2$ X is -S- or C-8 alkylene etc

only claims 1-3.

Thanks

RECEIVED
SEP 19 2002
STIC

STAFF USE ONLY

Searcher: Noble

Searcher Phone #: _____

Searcher Location: _____

Date Searcher Picked Up: _____

Date Completed: 9/19/95

Searcher Prep & Review Time: 10

Online Time: 24

Type of Search

____ NA Sequence (#)

____ AA Sequence (#)

1 Structure (#)

1 Bibliographic

____ Litigation

____ Fulltext

____ Other

Vendors and cost where applicable

1 STN _____ Dialog

____ Questel/Orbit _____ Lexis/Nexis

____ Westlaw _____ WWW/Internet

____ In-house sequence systems

____ Commercial _____ Oligomer _____ Score/Length

____ Interference _____ SPDI _____ Encode/Transl

____ Other (specify)

=> d his

(FILE 'HOME' ENTERED AT 11:40:04 ON 19 SEP 2005)

FILE 'HCAPLUS' ENTERED AT 11:40:14 ON 19 SEP 2005

L1 1 US2004204602/PN OR (US2003-618744# OR TW2003-092108102#)/AP,PRN

FILE 'REGISTRY' ENTERED AT 11:42:47 ON 19 SEP 2005

FILE 'HCAPLUS' ENTERED AT 11:42:47 ON 19 SEP 2005

L2 TRA L1 1- RN : 11 TERMS

FILE 'REGISTRY' ENTERED AT 11:42:47 ON 19 SEP 2005

L3 11 SEA L2

FILE 'WPIX' ENTERED AT 11:42:48 ON 19 SEP 2005

L4 1 L1

=> b hcap;d all 11

FILE 'HCAPLUS' ENTERED AT 11:47:32 ON 19 SEP 2005

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FILE COVERS 1907 - 19 Sep 2005 VOL 143 ISS 13

FILE LAST UPDATED: 18 Sep 2005 (20050918/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

L1 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:857222 HCAPLUS

DN 141:350863

ED Entered STN: 18 Oct 2004

TI Phenolic group-containing phosphonite compound and its manufacture as stabilizer for polymers

IN Lin, Erica; Su, Ching-Yie

PA Taiwan

SO U.S. Pat. Appl. Publ., 7 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM C07F009-02

INCL 558082000

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 29

FAN.CNT 1

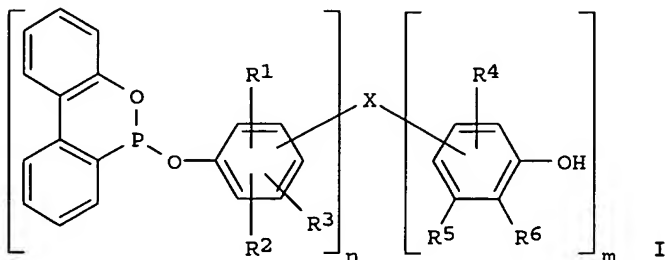
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PI	US 2004204602	A1	20041014	US 2003-618744	20030715 <--
	DE 102004013088	A1	20041104	DE 2004-102004013088	20040317 <--

Search done by Noble Jarrell

PRAI TW 2003-92108102 A 20030409 <--

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
US 2004204602	ICM	C07F009-02	
	INCL	558082000	
US 2004204602	NCL	558/082.000	
	ECLA	C07F009/6571L6	<--
DE 102004013088	ECLA	C07F009/6571L6	<--
OS MARPAT 141:350863			
GI			



- AB A phenolic group-containing phosphonite compound has formula I (R1-6 = H or C1-18-alkyl; n and m = 1-3; and the sum of n and m = 2-4; and X = S or C1-8 alkylene which may be optionally substituted with ≥ 1 C1-6-alkyl if the sum of n and m = 2, is a trivalent moiety of C3-C7 aliphatic group if the sum of n and m = 3, and is a tetravalent moiety of C4-C10 aliphatic group if the sum of n and m = 4). The compound 6-(4,4'-butylidene-2-tert-butyl-5-methylphenol-2'-tert-butyl-5'-methylphenoxy)dibenz[c,e]-[1,2]oxaphosphorine (preparation given) shows excellent thermal stability, the compound is only partially decomposed ($\leq 48\%$ is not decomposed) when the temperature reaches $\text{apprx. } 400^\circ$.
- ST heat stable antioxidant phenolic phosphonite
- IT 2082-79-3, Octadecyl 3-(3',5'-di-tert-butyl-4'-hydroxyphenyl)propionate 3806-34-6, Cyclic neopentetetrayl bis (octadecyl phosphite) 6683-19-8, Tetrakis(methylene(3,5-di-tert-butyl-4-hydroxyhydrocinnamate)methane 31570-04-4, Tris(2,4-di-tert-butylphenyl) phosphite
- RL: MOA (Modifier or additive use); USES (Uses)
(addition stabilizer; phenolic group-containing phosphonite compound stabilizer for polymers)
- IT 773105-02-5P
- RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(phenolic group-containing phosphonite compound stabilizer for polymers)
- IT 9003-53-6, Polystyrene
- RL: POF (Polymer in formulation); USES (Uses)
(phenolic group-containing phosphonite compound stabilizer for polymers)
- IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-56-9, Acrylonitrile-butadiene-styrene copolymer
- RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(phenolic group-containing phosphonite compound stabilizer for polymers)
- IT 85-60-9, 4,4'-Butylidenebis(2-tert-butyl-5-methylphenol) 22749-43-5, 6-Chlorodibenz[c,e](1,2)oxaphosphorin
- RL: RCT (Reactant); RACT (Reactant or reagent)
(phenolic group-containing phosphonite compound stabilizer for polymers)

=> b reg;d ide 13 tot

FILE 'REGISTRY' ENTERED AT 11:47:40 ON 19 SEP 2005

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 18 SEP 2005 HIGHEST RN 863382-78-9
DICTIONARY FILE UPDATES: 18 SEP 2005 HIGHEST RN 863382-78-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

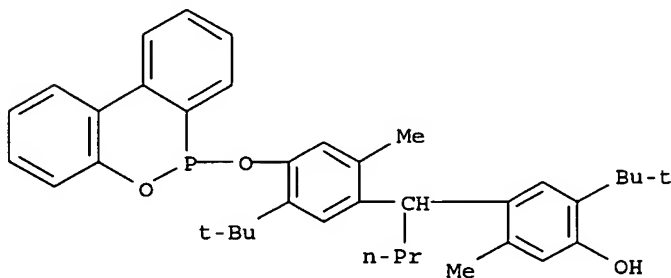
Please note that search-term pricing does apply when conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

L3 ANSWER 1 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN
RN 773105-02-5 REGISTRY
ED Entered STN: 01 Nov 2004
CN Phenol, 4-[1-[4-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-5-(1,1-dimethylethyl)-2-methylphenyl]butyl]-2-(1,1-dimethylethyl)-5-methyl- (9CI)
(CA INDEX NAME)
FS 3D CONCORD
MF C38 H45 O3 P
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

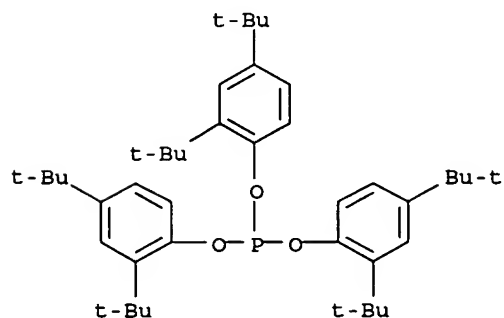
L3 ANSWER 2 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN
RN 31570-04-4 REGISTRY
ED Entered STN: 16 Nov 1984
CN Phenol, 2,4-bis(1,1-dimethylethyl)-, phosphite (3:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Phenol, 2,4-di-tert-butyl-, phosphite (3:1) (8CI)

OTHER NAMES:

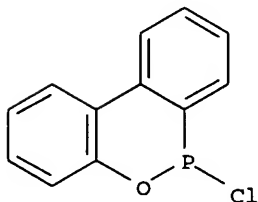
CN A 2112
 CN ADK 2112
 CN ADK Stab 2112
 CN ADK Stab 2112RG
 CN Alkanox 240
 CN Antioxidant 168
 CN AO 2
 CN B 311
 CN Chinox 168
 CN Cyanox 2704
 CN Doverphos S 480
 CN Hostanox PAR 24
 CN Hostanox TM-PAR 24
 CN Hostanox VP-PAR 24
 CN Irgafos 168
 CN Irganox 168
 CN JP 650
 CN Mark 2112
 CN Mark 2112E
 CN Naugard 524
 CN P 16
 CN P 48
 CN P 48 (stabilizer)
 CN Phos 6
 CN Phosphite 168
 CN PKY 168
 CN PL 10
 CN PL 10 (stabilizer)
 CN RA 168
 CN RA 168 (antioxidant)
 CN Sumilizer P 16
 CN Tomiphos 202
 CN Tris(2,4-di-tert-butylphenyl) phosphite
 CN Tris(2,4-tert-butylphenyl) phosphite
 CN Ultrinox 668
 FS 3D CONCORD
 DR 754233-11-9, 478284-78-5, 129038-69-3, 104381-89-7, 69344-92-9,
 219315-40-9
 MF C42 H63 O3 P
 CI COM
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA,
 CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB, IFICDB,
 IFIPAT, IFIUDB, IPA, MEDLINE, MSDS-OHS, PIRA, PROMT, SPECINFO,
 TOXCENTER, USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2099 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2100 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 3 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN
RN 22749-43-5 REGISTRY
ED Entered STN: 16 Nov 1984
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6-chloro- (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 6-Chloro-6H-dibenz[c,e][1,2]oxaphosphorin
CN 6-Chlorodibenz[c,e][1,2]oxaphosphorin
FS 3D CONCORD
MF C12 H8 Cl O P
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMLIST, IFICDB, IFIPAT,
IFIUDB, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

57 REFERENCES IN FILE CA (1907 TO DATE)
57 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 4 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN
RN 9003-56-9 REGISTRY
ED Entered STN: 16 Nov 1984
CN 2-Propenenitrile, polymer with 1,3-butadiene and ethenylbenzene (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,3-Butadiene polymer, with acrylonitrile and styrene (6CI)
CN 1,3-Butadiene, polymer with ethenylbenzene and 2-propenenitrile (9CI)
OTHER NAMES:
CN 0215A
CN 06-10A
CN 10JK2
CN 15NP
CN 2020AST
CN 2501K
CN 3001M
CN 301K
CN 342EZ
CN 429J
CN 480S
CN 660SF
CN 757K
CN 88K4
CN 9715A
CN 9738R
CN 9815A
CN A 201

CN A 201 (styrene polymer)
 CN A 402
 CN A 404
 CN A 404 (polymer)
 CN A 50B
 CN ABS
 CN ABS (polymer)
 CN ABS 1
 CN ABS 10
 CN ABS 12
 CN ABS 130
 CN ABS 150
 CN ABS 170
 CN ABS 180
 CN ABS 200NT
 CN ABS 2020
 CN ABS 2501K
 CN ABS 350
 CN ABS 4
 CN ABS 400
 CN ABS 433
 CN ABS 547P
 CN ABS 55NP
 CN ABS 60
 CN ABS 606
 CN ABS 900
 CN ABS 9815
 CN ABS copolymer
 CN ABS N-WN
 CN ABS plastic

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for
DISPLAY

DR 166091-25-4, 53637-30-2, 96827-60-0, 97048-04-9, 101484-40-6, 37229-19-9,
 37331-48-9, 73990-12-2, 74238-96-3, 74238-98-5, 82346-94-9, 39291-19-5,
 39306-83-7, 52433-83-7, 52434-26-1, 52434-32-9, 52682-91-4, 52907-26-3,
 179865-29-3, 179865-39-5

MF (C8 H8 . C4 H6 . C3 H3 N)x

CI PMS, COM

PCT Polyacrylic, Polyolefin, Polystyrene

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, ASMDATA*, BIOBUSINESS, BIOSIS, CA,
 CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHM,
 CSNB, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, NIOSHTIC,
 PDLCOM*, PIRA, PLASPEC*, PROMT, RTECS*, SCISEARCH, TOXCENTER, USPAT2,
 USPATFULL, VTB

(*File contains numerically searchable property data)

Other Sources: DSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

CM 1

CRN 107-13-1

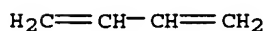
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CM 2

CRN 106-99-0

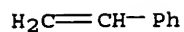
CMF C4 H6



CM 3

CRN 100-42-5

CMF C8 H8



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

19641 REFERENCES IN FILE CA (1907 TO DATE)

251 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

19651 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 5 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN

RN 9003-53-6 REGISTRY

ED Entered STN: 16 Nov 1984

CN Benzene, ethenyl-, homopolymer (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 105E

CN 138F

CN 143E

CN 144C

CN 144CKG2

CN 145D

CN 145G

CN 147F

CN 148G

CN 148H

CN 158K

CN 158KR

CN 158L-KG2

CN 168M

CN 168N

CN 168N003 Clear

CN 168N15

CN 16ERA8

CN 1800P

CN 20SPH

CN 271T

CN 2D-MicroHex

CN 2V62F

CN 31N

CN 333AZY

CN 3A

CN 454H

CN 456M

CN 473E

CN 475K

CN 5020B

CN 5026B

CN 50IS

CN 550P

CN 550P (styrene polymer)

CN 615APR

CN 666D

CN 666R

CN 666U

CN 666U26

CN 678U

CN 679R

CN 685D

CN 685D-W
CN 686E
CN 76RES7116
CN 825TV-PS
CN 9M62
CN 9M62C
CN A & M Polystyrene 679
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56748-62-0, 57657-06-4, 124229-31-8, 124229-48-7, 55128-06-8, 55465-00-4,
60120-16-3, 60328-46-3, 120037-99-2, 63849-49-0, 25038-60-2, 98444-30-5,
105270-05-1, 51609-83-7, 51609-87-1, 60880-98-0, 61584-89-2, 61584-90-5,
137262-45-4, 78354-47-9, 144637-93-4, 86090-91-7, 81834-12-0, 39470-87-6,
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MF (C8 H8)x
CI PMS, COM
PCT Polystyrene
SR CA
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ASMDATA*,
BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT,
CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM,
CSNB, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2,
ENCOMPPAT, ENCOMPPAT2, IFICDB, IFIPAT, IFIUDB, IMSCOSEARCH, IPA,
MEDLINE, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PLASPEC*, PROMT, RTECS*,
SCISEARCH, SPECINFO, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

CM 1

CRN 100-42-5
CMF C8 H8

$\text{H}_2\text{C}=\text{CH}-\text{Ph}$

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

106298 REFERENCES IN FILE CA (1907 TO DATE)
9775 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
106386 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 6 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN
RN 9003-07-0 REGISTRY
ED Entered STN: 16 Nov 1984
CN 1-Propene, homopolymer (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 001PF
CN 03P10/01
CN 04P10/01
CN 05P10-040
CN 1-Propene polymer
CN 1001A
CN 100GA02
CN 100GA03
CN 105PT
CN 1080F
CN 1148TC
CN 1184L
CN 1200FH

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CN 120SPW-L
CN 1304F1
CN 13T10A
CN 1501F
CN 150AG3
CN 1640P
CN 1947H
CN 19MN10
CN 1EPP
CN 2000C
CN 2000C (polyolefin)
CN 202E
CN 215H
CN 219D
CN 21E953E866
CN 230M4
CN 243.4A
CN 24MB200
CN 25AT
CN 260LLG202
CN 260LLG302
CN 2K93K
CN 3030BN1
CN 3030FN1
CN 3050BN1
CN 3050MNI
CN 30AT
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CN 31S3A
CN 3289MZ
CN 3355Z
CN 33MW247
CN 3435RG
CN 3501F
CN 3502L
CN 3522G
CN 3701T

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for
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58318-95-9, 131801-18-8, 123243-04-9, 60440-68-8, 132823-57-5,
133757-66-1, 95751-29-4, 104625-25-4, 37329-03-6, 37370-57-3, 112024-68-7,
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262610-59-3, 268745-65-9, 286465-97-2, 301161-99-9, 313378-44-8,
313471-92-0, 343259-03-0, 349655-63-6, 368887-79-0, 391599-57-8,
399509-34-3, 582300-70-7

MF (C3 H6)x

CI PMS, COM

PCT Polyolefin

LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ASMDATA*,
BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CBNB, CEN,
CHEMCATS, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*,
DIOGENES, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2,
HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC,
PDLCOM*, PIRA, PLASPEC*, PROMT, RTECS*, TOXCENTER, TULSA, ULIDAT, USAN,
USPAT2, USPATFULL, VTB

(*File contains numerically searchable property data)

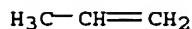
Other Sources: DSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

CM 1

CRN 115-07-1

CMF C3 H6



<-----User Break----->

=> b wpix;d all l4 tot

FILE 'WPIX' ENTERED AT 11:49:27 ON 19 SEP 2005

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FILE LAST UPDATED: 15 SEP 2005 <20050915/UP>
 MOST RECENT DERWENT UPDATE: 200559 <200559/DW>
 DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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 FOR FURTHER DETAILS: <http://www.thomsonderwent.com/dwpifv> <<<

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<http://thomsonderwent.com/support/dwpiref/reftools/classification/code-revision/>
 FOR DETAILS. <<<
 'BIX BI,ABEX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

L4 ANSWER 1 OF 1 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2004-765035 [75] WPIX
 DNC C2004-268230
 TI New phenolic group-containing phosphonite compound, useful as stabilizer
 for polymer.
 DC A18 E11
 IN LIN, E; SU, C
 PA (DOUB-N) DOUBLE BOND CHEM IND CO LTD; (FDCL-N) FDC LEES CHEM IND CO LTD;
 (LINE-I) LIN E; (SUCC-I) SU C
 CYC 2
 PI US 2004204602 A1 20041014 (200475)* 7 C07F009-02 <--
 DE 102004013088 A1 20041104 (200475) C07F009-655
 ADT US 2004204602 A1 US 2003-618744 20030715; DE 102004013088 A1 DE
 2004-102004013088 20040317
 PRAI TW 2003-108102 20030409
 IC ICM C07F009-02; C07F009-655
 ICS C08K005-53; C08L023-00
 AB US2004204602 A UPAB: 20041122
 NOVELTY - Phenolic group-containing phosphonite compound (I) is new.
 DETAILED DESCRIPTION - A phenolic group-containing phosphonite
 compound of formula (I) is new.
 R1-R6 = H or 1-18C alkyl;
 n, m = 1-3;
 n+m = 2-4; and
 X = (i) S or 1-8C alkylene optionally substituted with at least one
 1-6C alkyl (if n + m is 2); (ii) trivalent moiety of 3-7C aliphatic group
 (if n + m is 3); or (iii) tetravalent moiety of 4-10C aliphatic group (if

Search done by Noble Jarrell

n + m is 4).

INDEPENDENT CLAIMS are also included for:

(1) a polymer composition stabilized against oxygen, light and heat, comprising a polymer composition and phosphonite compound (I); and
(2) preparation of (I).

USE - Stabilizer for polymer.

ADVANTAGE - Compound (I) does not only combine the functions of phenolic compounds and phosphite but also possesses better thermal stability over phenolic compounds and phosphite.

Dwg.0/0

FS CPI

FA AB; GI; DCN

MC CPI: A08-A01A; E05-G01; E07-H03

=> b home

FILE 'HOME' ENTERED AT 11:49:33 ON 19 SEP 2005

=>

=> d his

(FILE 'HOME' ENTERED AT 11:40:04 ON 19 SEP 2005)

FILE 'HCAPLUS' ENTERED AT 11:40:14 ON 19 SEP 2005

L1 1 US2004204602/PN OR (US2003-618744# OR TW2003-092108102#)/AP,PRN

FILE 'REGISTRY' ENTERED AT 11:42:47 ON 19 SEP 2005

FILE 'HCAPLUS' ENTERED AT 11:42:47 ON 19 SEP 2005

L2 TRA L1 1- RN : 11 TERMS

FILE 'REGISTRY' ENTERED AT 11:42:47 ON 19 SEP 2005

L3 11 SEA L2

FILE 'WPIX' ENTERED AT 11:42:48 ON 19 SEP 2005

L4 1 L1

FILE 'REGISTRY' ENTERED AT 11:54:23 ON 19 SEP 2005

L5 STR

L6 1 L5

L7 16 L5 FULL

L8 1 L7 AND L3

SAV TEM L7 SAC744F0/A

FILE 'HCAPLUS' ENTERED AT 12:04:07 ON 19 SEP 2005

L9 16 L7

E LIN E/AU

L10 353 E3-20

E LIN ERICA/AU

L11 1 E3

E SU CH/AU

E SU C/AU

L12 186 E3,E26

E SU CHING/AU

L13 5 E31

E SU CHINGYIE/AU

E CHING S/AU

L14 25 E3-10

E CHING SU/AU

E FDC/CS,PA

E FDCLESS/CS,PA

L15 1 L9 AND L10-14

FILE 'HCAOLD' ENTERED AT 12:07:47 ON 19 SEP 2005

L16 0 L7

FILE 'USPATFULL, USPAT2' ENTERED AT 12:07:54 ON 19 SEP 2005

L17 8 L7

E LIN E/AU

E LIN ERICA/AU

L18 1 E3

E SU C/AU

E SU CHING/AU

L19 1 E17

E SU CHINGYIE/AU

L20 1 L17 AND L18-19

L21 7 L17 NOT L20

FILE 'HCAPLUS' ENTERED AT 12:09:50 ON 19 SEP 2005

L22 15 L9 NOT L15

=> b reg

FILE 'REGISTRY' ENTERED AT 12:12:04 ON 19 SEP 2005

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 18 SEP 2005 HIGHEST RN 863382-78-9
 DICTIONARY FILE UPDATES: 18 SEP 2005 HIGHEST RN 863382-78-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

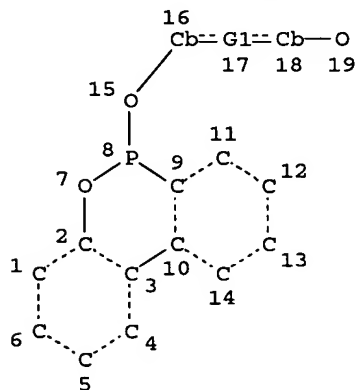
Please note that search-term pricing does apply when conducting SmartSELECT searches.

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*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
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*****
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Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d que sta l7
 L5 STR



VAR G1=AK/S
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 GGCAT IS MCY UNS AT 16
 GGCAT IS MCY UNS AT 18
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE
 L7 16 SEA FILE=REGISTRY SSS FUL L5

100.0% PROCESSED 1992 ITERATIONS

16 ANSWERS

Search done by Noble Jarrell

SEARCH TIME: 00.00.01

=> b hcap

FILE 'HCAPLUS' ENTERED AT 12:12:21 ON 19 SEP 2005
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FILE COVERS 1907 - 19 Sep 2005 VOL 143 ISS 13
 FILE LAST UPDATED: 18 Sep 2005 (20050918/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

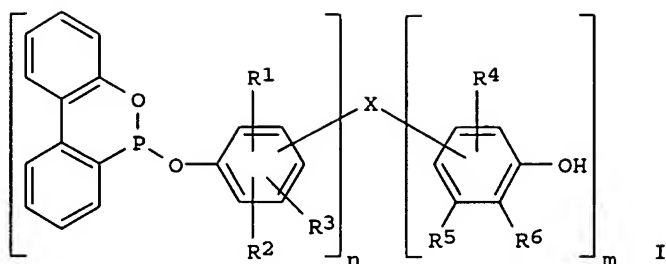
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L15 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2004:857222 HCAPLUS
 DN 141:350863
 ED Entered STN: 18 Oct 2004
 TI Phenolic group-containing phosphonite compound and its manufacture as stabilizer for polymers
 IN Lin, Erica; Su, Ching-Yie
 PA Taiwan
 SO U.S. Pat. Appl. Publ., 7 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 IC ICM C07F009-02
 INCL 558082000
 CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 29
 FAN.CNT 1

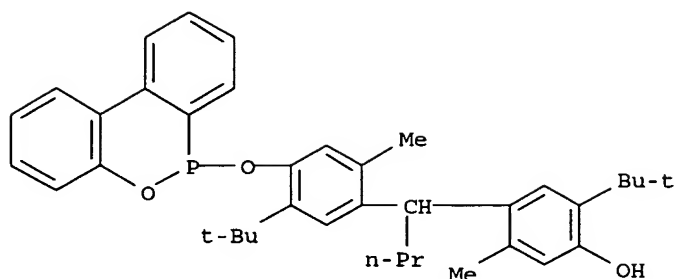
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004204602	A1	20041014	US 2003-618744	20030715
	DE 102004013088	A1	20041104	DE 2004-102004013088	20040317
PRAI	TW 2003-92108102	A	20030409		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004204602	ICM	C07F009-02
	INCL	558082000
US 2004204602	NCL	558/082.000
	ECLA	C07F009/6571L6
DE 102004013088	ECLA	C07F009/6571L6
OS	MARPAT	141:350863
GI		



- AB A phenolic group-containing phosphonite compound has formula I (R1-6 = H or C1-18-alkyl; n and m = 1-3; and the sum of n and m = 2-4; and X = S or C1-8 alkylene which may be optionally substituted with ≥ 1 C1-6-alkyl if the sum of n and m = 2, is a trivalent moiety of C3-C7 aliphatic group if the sum of n and m = 3, and is a tetravalent moiety of C4-C10 aliphatic group if the sum of n and m = 4). The compound 6-(4,4'-butylidene-2-tert-butyl-5-methylphenol-2'-tert-butyl-5'-methylphenoxy)dibenz[c,e]-[1,2]oxaphosphorine (preparation given) shows excellent thermal stability, the compound is only partially decomposed ($\leq 48\%$ is not decomposed) when the temperature reaches .apprx.400°.
- ST heat stable antioxidant phenolic phosphonite
- IT 2082-79-3, Octadecyl 3-(3',5'-di-tert-butyl-4'-hydroxyphenyl)propionate
 3806-34-6, Cyclic neopentetetrayl bis (octadecyl phosphite) 6683-19-8, Tetrakisethylene(3,5-di-tert-butyl-4-hydroxyhydrocinnamate)methane
 31570-04-4, Tris(2,4-di-tert-butylphenyl) phosphite
 RL: MOA (Modifier or additive use); USES (Uses)
 (addition stabilizer; phenolic group-containing phosphonite compound stabilizer for polymers)
- IT 773105-02-5P
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (phenolic group-containing phosphonite compound stabilizer for polymers)
- IT 9003-53-6, Polystyrene
 RL: POF (Polymer in formulation); USES (Uses)
 (phenolic group-containing phosphonite compound stabilizer for polymers)
- IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-56-9, Acrylonitrile-butadiene-styrene copolymer
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (phenolic group-containing phosphonite compound stabilizer for polymers)
- IT 85-60-9, 4,4'-Butylidenebis(2-tert-butyl-5-methylphenol) 22749-43-5, 6-Chlorodibenz[c,e](1,2)oxaphosphorin
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (phenolic group-containing phosphonite compound stabilizer for polymers)
- IT 773105-02-5P
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (phenolic group-containing phosphonite compound stabilizer for polymers)
- RN 773105-02-5 HCAPLUS
- CN Phenol, 4-[1-[4-(6H-dibenz[c,e](1,2)oxaphosphorin-6-yloxy)-5-(1,1-dimethylethyl)-2-methylphenyl]butyl]-2-(1,1-dimethylethyl)-5-methyl- (9CI)
 (CA INDEX NAME)



=> d all hitstr 122 tot

L22 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2005:903958 HCAPLUS
 DN 143:230763
 ED Entered STN: 26 Aug 2005
 TI Method for preparing arylphosphonite antioxidant
 IN Su, Wen-Chiung; Wu, Tseng-Rong; Sheng, Chin-Shang
 PA Chung Shan Institute of Science & Technology, Taiwan
 SO U.S. Pat. Appl. Publ., 6 pp.
 CODEN: USXXCO

DT Patent
 LA English
 IC ICM C09K015-32
 INCL 252400200
 CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 45

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005184277	A1	20050825	US 2004-983620	20041109
PRAI	TW 2004-93104131	A	20040219		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005184277	ICM	C09K015-32
	INCL	252400200
US 2005184277	NCL	252/400.200

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A method for preparing an arylphosphonite antioxidant I (Ar is II or III.) comprises the steps of: (A) heating a 2-phenylphenol compound with a phosphorus trichloride compound in the present of a zinc chloride catalyst to obtain a 6-chloro-6H-dibenz[c,e][1,2]oxaphosphorin (IV); (b) removing the excess phosphorus trichloride; and (c) heating an organic solution of a di-hydroxylphenol of Ar-(OH)₂ with IV to form the arylphosphonite antioxidant I.

ST arylphosphonite antioxidant prepn method

IT Antioxidants
 (method for preparing arylphosphonite antioxidant for polymer composition)

IT 9002-88-4, Polyethylene
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (Formosa 9003; method for preparing arylphosphonite antioxidant for polymer composition)

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IT 22749-43-5P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (intermediate; method for preparing arylphosphonite antioxidant for polymer composition)

IT 85-60-9, 4,4'-Butylidenebis[2-tert-butyl-5-methylphenol]
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (intermediate; method for preparing arylphosphonite antioxidant for polymer composition)

IT 7646-85-7, Zinc dichloride, uses
 RL: CAT (Catalyst use); USES (Uses)
 (method for preparing arylphosphonite antioxidant for polymer composition)

IT 773105-02-5P, 6-(4,4'-Butylidene-2-tert-butyl-5-methylphenol-2'-tert-butyl-5'-methylphenoxy)dibenz[c,e][1,2]oxaphosphorin
 862581-86-0P, 6-(2,2'-Methylene-6-tert-butyl-4-methylphenol-6'-tert-butyl-4'-methylphenoxy)dibenz[c,e][1,2]oxaphosphorin
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (method for preparing arylphosphonite antioxidant for polymer composition)

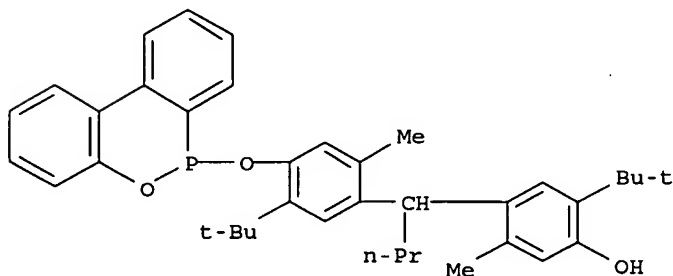
IT 9003-07-0
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (method for preparing arylphosphonite antioxidant for polymer composition)

IT 108-88-3, uses 108-90-7, Chlorobenzene, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (solvent; method for preparing arylphosphonite antioxidant for polymer composition)

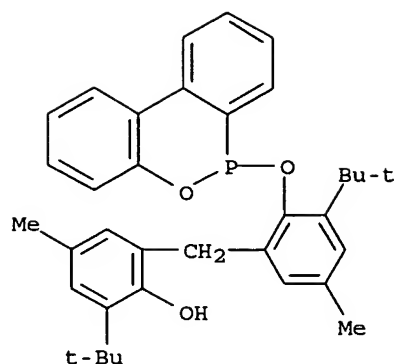
IT 90-43-7, 2-Phenylphenol 119-47-1, 2,2'-Methylenebis[6-tert-butyl-4-methylphenol] 7719-12-2, Phosphorous trichloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (starting material; method for preparing arylphosphonite antioxidant for polymer composition)

IT 773105-02-5P, 6-(4,4'-Butylidene-2-tert-butyl-5-methylphenol-2'-tert-butyl-5'-methylphenoxy)dibenz[c,e][1,2]oxaphosphorin
 862581-86-0P, 6-(2,2'-Methylene-6-tert-butyl-4-methylphenol-6'-tert-butyl-4'-methylphenoxy)dibenz[c,e][1,2]oxaphosphorin
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (method for preparing arylphosphonite antioxidant for polymer composition)

RN 773105-02-5 HCAPLUS
 CN Phenol, 4-[1-[4-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-5-(1,1-dimethylethyl)-2-methylphenyl]butyl]-2-(1,1-dimethylethyl)-5-methyl- (9CI)
 (CA INDEX NAME)



RN 862581-86-0 HCAPLUS
 CN INDEX NAME NOT YET ASSIGNED



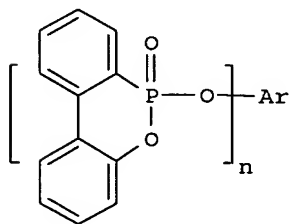
L22 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2005:409271 HCAPLUS
 DN 142:463872
 ED Entered STN: 13 May 2005
 TI Method for preparing a biphenylphosphonate compound useful as flame retardant
 IN Su, Wen-Chiung; Sheng, Chin-Shang
 PA Chung Shan Institute of Science & Technology, Taiwan
 SO U.S. Pat. Appl. Publ., 7 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 IC ICM C07F009-02
 INCL 558082000
 CC 29-7 (Organometallic and Organometalloidal Compounds)
 Section cross-reference(s): 50
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005101793	A1	20050512	US 2004-972396	20041026
PRAI TW 2003-92131729	A	20031112		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005101793	ICM	C07F009-02
	INCL	558082000
US 2005101793	NCL	558/082.000
OS MARPAT 142:463872		

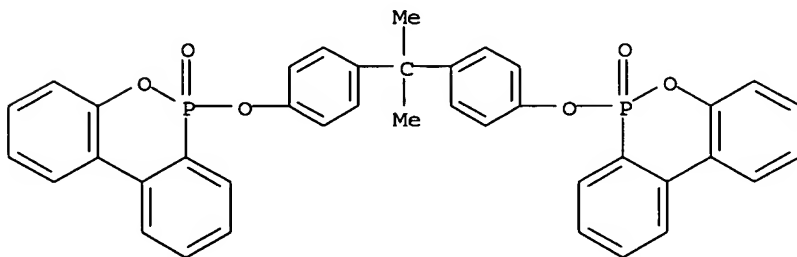
GI



I

AB A method for preparing biphenylphosphonate compound I ($n = 2, 3$; Ar = C6-C16 aromatic group), useful as flame retardant is described. Thus, reaction of o-phenylphenol with PCl_3 in the presence of zinc chloride catalyst gave

- 6-chloro-6H-dibenz[c,e][1,2]oxaphosphorin which on sequential treatment with polyhydroxybenzene compound and oxidation gave title compound I.
- ST biphenyl phosphonate prepn flame retardant; phenylphenol zinc chloride catalyzed phosphorylation; chlorodibenz oxaphosphorin prepn reaction polyhydroxybenzene oxidn
- IT Fireproofing agents
(preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)
- IT 7646-85-7, Zinc dichloride, uses
RL: CAT (Catalyst use); USES (Uses)
(preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)
- IT 2752-19-4 105281-82-1
RL: FMU (Formation, unclassified); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
(preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)
- IT 80-05-7, Bisphenol A, reactions 87-66-1, 1,2,3-Trihydroxybenzene 90-43-7, o-Phenylphenol 108-46-3, Resorcinol, reactions 120-80-9, Catechol, reactions 123-31-9, Hydroquinone, reactions 1948-33-0, tert-Butylhydroquinone 7719-12-2, Phosphorus trichloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)
- IT 22749-43-5P 32186-92-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)
- IT 847452-97-5P 847452-98-6P 851478-73-4P 851478-74-5P 851478-75-6P 851478-76-7P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)
- IT 847452-98-6P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)
- RN 847452-98-6 HCAPLUS
- CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, 6,6'-dioxide (9CI) (CA INDEX NAME)



AN 2005:219885 HCAPLUS
 DN 142:281496
 ED Entered STN: 11 Mar 2005
 TI Flame retardant polyester-based fibers for artificial hair
 IN Masuda, Toshiyuki
 PA Kaneka Corporation, Japan
 SO PCT Int. Appl., 38 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 IC ICM D01F006-92
 ICS A41D003-00
 CC 40-10 (Textiles and Fibers)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005021848	A1	20050310	WO 2004-JP12039	20040816
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2005076147	A2	20050324	JP 2003-308371	20030901
PRAI	JP 2003-308371	A	20030901		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005021848	ICM	D01F006-92
	ICS	A41D003-00
WO 2005021848	ECLA	D01F001/07; D01F006/62; D01F006/84
JP 2005076147	FTERM	4J002/BC022; 4J002/BD122; 4J002/BG002; 4J002/CF041; 4J002/CF051; 4J002/CF061; 4J002/CF071; 4J002/CF162; 4J002/CL002; 4J002/CP001; 4J002/DE108; 4J002/DE138; 4J002/DE148; 4J002/DE238; 4J002/DJ008; 4J002/DJ018; 4J002/DJ038; 4J002/DJ048; 4J002/DJ058; 4J002/EW136; 4J002/EW157; 4J002/FD136; 4J002/FD137; 4J002/FD138; 4J002/GB00; 4J002/GK00; 4L035/BB31; 4L035/BB72; 4L035/CC03; 4L035/DD08; 4L035/EE14; 4L035/JJ03; 4L035/JJ25; 4L035/JJ28; 4L035/KK01

OS MARPAT 142:281496

AB The fibers are manufactured by melt spinning either a composition obtained by melt-kneading 100 parts of (A) ≥ 1 polyesters selected among polyalkylene terephthalates (e.g., PET) and copolyesters consisting mainly of a polyalkylene terephthalate with 2-20 parts of (B) a cyclic organophosphorus compound and/or phosphoric ester amide compound or a composition obtained by mixing these ingredients with (C) fine organic particles and/or (D) fine inorg. particles. The artificial hair retains fiber properties inherent in general polyester fibers, such as heat resistance and strength/elongation, is excellent in flame retardancy, fixability, nondripping property, transparency, and unsusceptibility to devitrification, and has a controlled gloss.

ST polyalkylene terephthalate fireproofing agent phosphoric ester amide; cyclic organophosphorus compd fireproofing agent polyester fiber; flame retardant polyester fiber artificial hair

IT Fire-resistant materials

Fireproofing agents

Hair substitutes

(flame retardant polyester fibers for artificial hair)

IT Polyesters, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material)

use); USES (Uses)
 (flame retardant polyester fibers for artificial hair)
 IT Polyester fibers, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flame retardant polyester fibers for artificial hair)
 IT Polyester fibers, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (poly(tetramethylene terephthalate); flame retardant polyester fibers
 for artificial hair)
 IT Polyester fibers, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (terephthalic acid-trimethylene glycol; flame retardant polyester
 fibers for artificial hair)
 IT 26062-94-2, Polybutylene terephthalate 26590-75-0, Polytrimethylene
 terephthalate
 RL: POF (Polymer in formulation); TEM (Technical or engineered material
 use); USES (Uses)
 (fibers, assumed monomers; flame retardant polyester fibers for
 artificial hair)
 IT 24968-12-5, Polybutylene terephthalate 25038-59-9, Bellpet EFG 85A, uses
 26546-03-2, Polytrimethylene terephthalate
 RL: POF (Polymer in formulation); TEM (Technical or engineered material
 use); USES (Uses)
 (fibers; flame retardant polyester fibers for artificial hair)
 IT 113504-81-7 223268-28-8 847452-97-5 847452-98-6
 847452-99-7 847453-00-3
 RL: MOA (Modifier or additive use); USES (Uses)
 (fireproofing agent; flame retardant polyester fibers for artificial
 hair)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

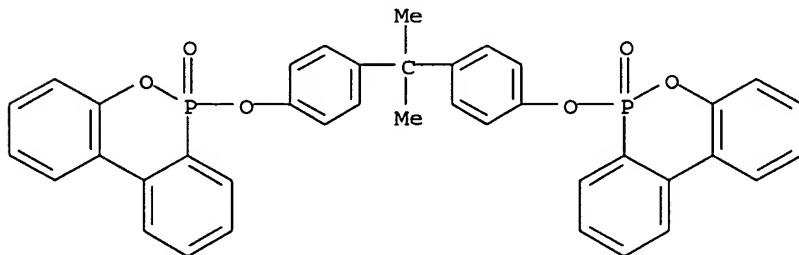
RE

- (1) Kaneka Corp; WO 2003008679 A1 2003
- (2) Mitsubishi Rayon Co Ltd; JP 54-43546 A 1979
- (3) Nippon Ester Kabushiki Kaisha; JP 63-185992 A 1988 HCAPLUS
- (4) Toray Industries Inc; JP 3175222 B2 2001 HCAPLUS
- (5) Toyobo Co Ltd; JP 53-56250 A 1978 HCAPLUS

IT 847452-98-6
 RL: MOA (Modifier or additive use); USES (Uses)
 (fireproofing agent; flame retardant polyester fibers for artificial
 hair)

RN 847452-98-6 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[(1-methylethylidene)bis(4,1-
 phenyleneoxy)]bis-, 6,6'-dioxide (9CI) (CA INDEX NAME)



L22 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:595057 HCAPLUS

DN 131:230267

ED Entered STN: 21 Sep 1999

TI Catalyst comprising a complex of a Group VIII metal and a phosphonite
 ligand and its use in hydroformylation

IN Maas, Heiko; Paciello, Rocco; Roper, Michael; Fischer, Jakob; Siegel,
 Wolfgang

PA BASF A.-G., Germany
 SO PCT Int. Appl., 31 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 IC ICM B01J031-18
 ICS C07C045-50; C07F009-6571
 CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
 Section cross-reference(s): 67

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9946044	A1	19990916	WO 1999-EP1597	19990311
	W: CN, JP, KR, SG, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19810794	A1	19990916	DE 1998-19810794	19980312
	EP 1064093	A1	20010103	EP 1999-911776	19990311
	EP 1064093	B1	20030604		
	R: BE, DE, ES, FR, GB, IT, NL				
	JP 2002505945	T2	20020226	JP 2000-535451	19990311
	ES 2201686	T3	20040316	ES 1999-911776	19990311
	US 6440891	B1	20020827	US 2000-623175	20000829
PRAI	DE 1998-19810794	A	19980312		
	WO 1999-EP1597	W	19990311		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9946044	ICM	B01J031-18
	ICS	C07C045-50; C07F009-6571
WO 9946044	ECLA	B01J031/18C; C07F009/6574A6; C07C045/50; C07C253/30; C07F009/6571L6
DE 19810794	ECLA	B01J031/18C; C07C045/50; C07C253/30; C07F009/6571L6; C07F009/6574A6
US 6440891	NCL	502/162.000; 558/085.000; 568/449.000; 568/454.000; 568/903.000
	ECLA	B01J031/18C; C07C253/30; C07F009/6571L6; C07F009/6574A6; C07C045/50

OS MARPAT 131:230267

AB The catalysts comprise ≥ 1 Group VIII metal (especially Co, Ru, or Rh) complex containing ≥ 1 bidentate or multidentate phosphonite ligand fitting a specified general structure or its salt. Compds. containing ≥ 1 ethylenically unsatd. double bond are hydroformylated by reaction with CO and H in the presence of such a catalyst, which may be formed in situ. Thus, 1,1'-biphenyl-2-ol was cyclocondensed with PCl₃ to give 6-chloro-6H-dibenz[c,e][1,2]oxaphosphorin, which was condensed 2:1 with 1,1'-binaphthalene-2,2'-diol to give a suitable ligand (I). Hydroformylation of 1.5 g CH₃CH:CHCH₂CN in 1.5 g xylene containing 12.3 mg I and 0.75 mg dicarbonyl(2,4-pentanedionato)rhodium with 1:1 CO-H₂ under Ar at 100°/80 bars for 4 h produced a mixture of formylvaleronitrile isomers in 57% yield.

ST metal bisphosphonite complex hydroformylation catalyst

IT Group VIII element complexes

RL: CAT (Catalyst use); USES (Uses)

(hydroformylation catalysts comprising a complex of a Group VIII metal and a multidentate phosphonite ligand)

IT Hydroformylation catalysts

(preparation of hydroformylation catalysts comprising a complex of a Group VIII metal and a multidentate phosphonite ligand)

IT 4635-87-4, 3-Pentenitrile

RL: RCT (Reactant); RACT (Reactant or reagent)

(catalysts for hydroformylation of)

IT 7440-16-6D, Rhodium, complexes with multidentate phosphonite ligands, uses

7440-18-8D, Ruthenium, complexes with multidentate phosphonite ligands, uses

7440-48-4D, Cobalt, complexes with multidentate phosphonite ligands, uses

RL: CAT (Catalyst use); USES (Uses)
(hydroformylation catalysts)

IT 90-43-7, 1,1'-Biphenyl-2-ol 602-09-5, [1,1'-Binaphthalene]-2,2'-diol
7719-12-2, Phosphorus trichloride 14078-41-2 14874-82-9,
Dicarbonyl(2,4-pentanedionato)rhodium

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of hydroformylation catalysts comprising a complex of a Group
VIII metal and a multidentate phosphonite ligand)

IT 22749-43-5P, 6-Chloro-6H-dibenz[c,e][1,2]oxaphosphorin 214120-48-6P
214120-51-1P 214120-52-2DP, Group VIII metal complexes
221525-01-5P 221525-10-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(preparation of hydroformylation catalysts comprising a complex of a Group
VIII metal and a multidentate phosphonite ligand)

IT 214120-48-6D, Group VIII metal complexes 214120-51-1D, Group VIII metal
complexes 214120-52-2D, Group VIII metal complexes
221525-01-5D, Group VIII metal complexes 221525-10-6D, Group
VIII metal complexes 243857-91-2D, Group VIII metal complexes
243857-92-3D, Group VIII metal complexes

RL: CAT (Catalyst use); USES (Uses)

(preparation of hydroformylation catalysts comprising a multidentate
phosphonite ligand)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Babin, J; US 5360938 A 1994 HCAPLUS
- (2) Basf Ag; WO 9913983 A 1999 HCAPLUS
- (3) Keiichi, S; US 5600032 A 1997 HCAPLUS
- (4) Mitsubishi Chem Corp; JP 09255610 A 1997 HCAPLUS
- (5) Packett, D; US 5312996 A 1994 HCAPLUS

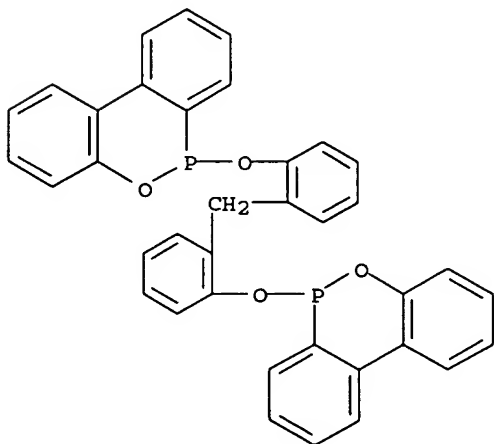
IT 214120-52-2DP, Group VIII metal complexes 221525-10-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(preparation of hydroformylation catalysts comprising a complex of a Group
VIII metal and a multidentate phosphonite ligand)

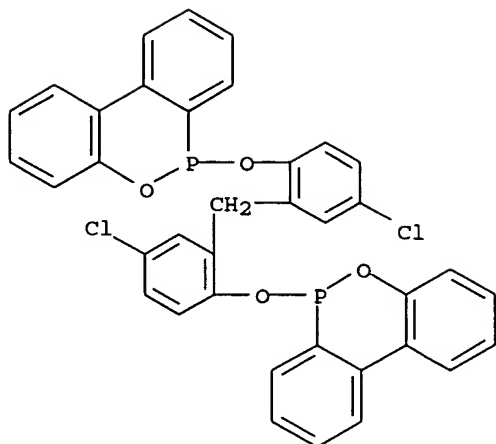
RN 214120-52-2 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis(2,1-phenyleneoxy)]bis-
(9CI) (CA INDEX NAME)

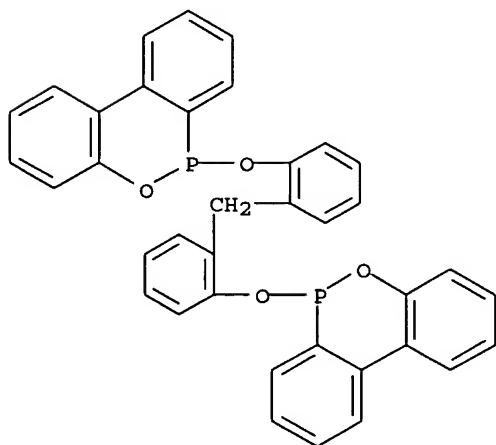


RN 221525-10-6 HCAPLUS

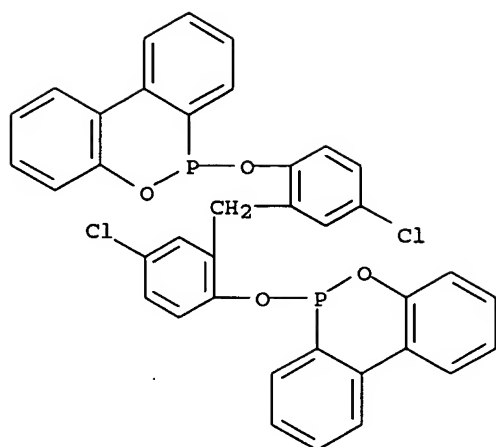
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



IT 214120-52-2D, Group VIII metal complexes 221525-10-6D,
 Group VIII metal complexes
 RL: CAT (Catalyst use); USES (Uses)
 (preparation of hydroformylation catalysts comprising a multidentate
 phosphonite ligand)
 RN 214120-52-2 HCAPLUS
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis(2,1-phenyleneoxy)]bis-
 (9CI) (CA INDEX NAME)



RN 221525-10-6 HCAPLUS
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-
 phenylene)oxy]]bis- (9CI) (CA INDEX NAME)



L22 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1999:194390 HCAPLUS
 DN 130:254051
 ED Entered STN: 25 Mar 1999
 TI Nickel complex catalyst having a cyclic phosphonite ligand, its preparation and use for hydrocyanation of butadienes
 IN Fischer, Jakob; Siegel, Wolfgang
 PA BASF A.-G., Germany
 SO Ger. Offen., 21 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC ICM B01J031-22
 ICS C07F019-00; C07C255-07; C07C255-04; C07C253-10; C07B043-08; C07B037-08
 ICA C07F015-04; C07F009-6574
 CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
 Section cross-reference(s): 67

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19740180	A1	19990318	DE 1997-19740180	19970912
	CA 2303776	AA	19990325	CA 1998-2303776	19980909
	WO 9913983	A1	19990325	WO 1998-EP5733	19980909
	W: AL, AU, BG, BR, BY, CA, CN, CZ, GE, HU, ID, IL, JP, KR, KZ, LT, LV, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, UA, US, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9895385	A1	19990405	AU 1998-95385	19980909
	BR 9812207	A	20000718	BR 1998-12207	19980909
	EP 1019190	A1	20000719	EP 1998-948941	19980909
	EP 1019190	B1	20041201		
	R: BE, DE, ES, FR, GB, IT, NL				
	TW 400249	B	20000801	TW 1998-87114963	19980909
	JP 2001516640	T2	20011002	JP 2000-511587	19980909
	ES 2234158	T3	20050616	ES 1998-948941	19980909
	MX 200001883	A	20001109	MX 2000-1883	20000223
	US 6242633	B1	20010605	US 2000-508051	20000307
	US 2001014647	A1	20010816	US 2001-782762	20010214
	US 6355833	B2	20010214		
PRAI	DE 1997-19740180	A	19970912		
	WO 1998-EP5733	W	19980909		
	US 2000-508051	A3	20000307		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 19740180	ICM	B01J031-22
	ICS	C07F019-00; C07C255-07; C07C255-04; C07C253-10; C07B043-08; C07B037-08
	ICA	C07F015-04; C07F009-6574
DE 19740180	ECLA	B01J031/18C; C07C253/10; C07C253/30; C07F009/6571L6; C07F015/04B
WO 9913983	ECLA	B01J031/18C; C07C253/10; C07C253/30; C07F009/6571L6; C07F015/04B
ES 2234158	ECLA	B01J031/18C; C07C253/10; C07C253/30; C07F009/6571L6; C07F015/04B
US 6242633	NCL	558/334.000; 558/338.000; 558/355.000
	ECLA	B01J031/18C; C07C253/30; C07F009/6571L6; C07F015/04B; C07C253/10
US 2001014647	NCL	502/162.000
	ECLA	B01J031/18C; C07C253/10; C07C253/30; C07F009/6571L6; C07F015/04B

OS MARPAT 130:254051

AB A Ni(0) complex having ≥ 1 cyclic phosphonite ligand, especially a 6-aryloxy-6H-dibenz[c,e][1,2]oxaphosphorin, catalyzes the addition of HCN to butadiene or its derivs. to form nonconjugated nitriles and/or adiponitrile. Thus, 2-hydroxybiphenyl was treated with PCl_3 and the product cyclized with ZnCl_2 and condensed with PhOH to give 6-phenoxy-6H-dibenz[c,e][1,2]oxaphosphorin (I). Treatment of a C4 fraction containing 40.50 volume% butadiene with HCN in toluene at 80° in the presence of bis(1,5-cyclooctadiene)nickel and I gave a mixture of C5 nitriles in 84% yield (based on HCN) having a 2.45:1 ratio of 3-pentenitrile to 2-methyl-3-butenitrile.

ST butadiene hydrocyanation nickel complex catalyst

IT Hydrocyanation catalysts

Isomerization catalysts

(nickel complexes having a cyclic phosphonite ligand)

IT 22749-43-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)

IT 645-59-0P, 3-Phenylpropionitrile 28906-50-5P, Methylglutaronitrile

RL: BYP (Byproduct); PREP (Preparation)

(nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation)

IT 111-69-3P, Adiponitrile 1823-91-2P, 2-Phenylpropionitrile

RL: IMF (Industrial manufacture); PREP (Preparation)

(nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation)

IT 100-42-5, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation)

IT 592-51-8P, 4-Pentenitrile

RL: BYP (Byproduct); PREP (Preparation)

(nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)

IT 7440-02-0D, Nickel, cyclic phosphonite complexes, uses 35948-27-7D,

6-Phenoxy-6H-dibenz[c,e][1,2]oxaphosphorin, nickel complexes

221524-76-1D, nickel complexes 221524-84-1D, nickel complexes

221524-90-9D, nickel complexes 221524-95-4D, nickel complexes

RL: CAT (Catalyst use); USES (Uses)

(nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)

IT 16529-66-1P, trans-3-Pentenitrile

RL: IMF (Industrial manufacture); PREP (Preparation)

(nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)

IT 4635-87-4P, 3-Pentenitrile 16529-56-9P, 2-Methyl-3-butenitrile
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (nickel complex catalyst having a cyclic phosphonite ligand for
 hydrocyanation of butadienes)

IT 106-99-0, 1,3-Butadiene, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (nickel complex catalyst having a cyclic phosphonite ligand for
 hydrocyanation of butadienes)

IT 221525-01-5P 221525-10-6P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (potential intermediate; preparation of nickel complex catalyst having a
 cyclic phosphonite ligand for hydrocyanation of butadienes)

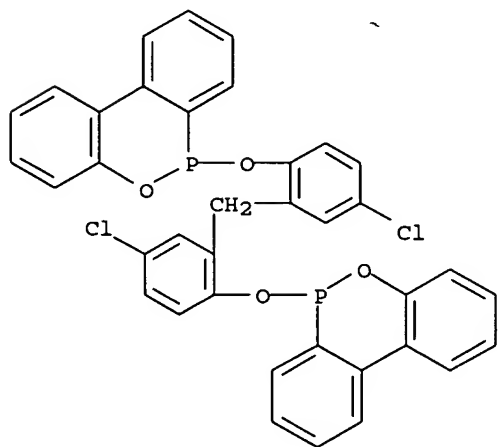
IT 90-43-7, 2-Hydroxybiphenyl 108-95-2, Phenol, reactions 1295-35-8,
 Bis(1,5-cyclooctadiene)nickel 14078-41-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of nickel complex catalyst having a cyclic phosphonite ligand
 for hydrocyanation of butadienes)

IT 35948-27-7P, 6-Phenoxy-6H-dibenz[c,e][1,2]oxaphosphorin 221524-76-1P
 221524-84-1P 221524-90-9P 221524-95-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation of nickel complex catalyst having a cyclic phosphonite ligand
 for hydrocyanation of butadienes)

IT 221525-10-6P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (potential intermediate; preparation of nickel complex catalyst having a
 cyclic phosphonite ligand for hydrocyanation of butadienes)

RN 221525-10-6 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-
 phenylene)oxy]]bis- (9CI) (CA INDEX NAME)



L22 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1998:682212 HCAPLUS
 DN 129:289879
 ED Entered STN: 28 Oct 1998
 TI Process for producing aldehydes
 IN Urata, Hisao; Wada, Yasuhiro
 PA Mitsubishi Chemical Corp., Japan
 SO PCT Int. Appl., 89 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 IC ICM C07C047-02

ICS C07C045-50; B01J031-24
CC 23-14 (Aliphatic Compounds)
FAN.CNT 1

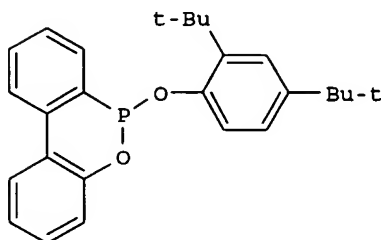
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9843935	A1	19981008	WO 1998-JP1362	19980326
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	JP 2003137831	A2	20030514	JP 1997-75530	19970327
	JP 2003137832	A2	20030514	JP 1997-75536	19970327
	AU 9865183	A1	19981022	AU 1998-65183	19980326
	US 6265620	B1	20010724	US 1999-381629	19990927
PRAI	JP 1997-75530	A	19970327		
	JP 1997-75536	A	19970327		
	WO 1998-JP1362	W	19980326		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9843935	ICM	C07C047-02
	ICS	C07C045-50; B01J031-24
WO 9843935	ECLA	B01J031/18C; C07C045/50
US 6265620	NCL	568/454.000; 568/451.000
	ECLA	B01J031/18C; C07C045/50

OS CASREACT 129:289879; MARPAT 129:289879

GI



I

AB In the title process, an olefinic compound is reacted with carbon monoxide and hydrogen in the presence of a catalyst containing a metal of the groups 8 to 10 and a trivalent organophosphorus compound, e.g., (Y3O)(Z3O)PX3 [X3 = (un)substituted hydrocarbon; Y3, Z3 = (un)substituted aromatic hydrocarbon]. Thus, propylene was treated with hydrogen/CO gaseous mixture in the presence of [Rh(OAc)(COD)]2 and phosphonite compound I in toluene at 70° under 10.0 atm for 1.0 h to give 100% aldehydes (n/i ratio = 1.3, n = butyraldehyde, i = isobutyraldehyde).

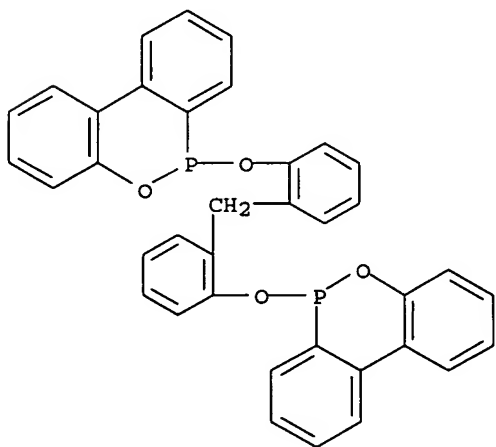
ST olefin hydroformylation catalyst; phosphonite catalyst hydroformylation olefin; carbon monoxide hydrogen hydroformylation olefin; aldehyde prepn

IT Hydroformylation catalysts
(process for producing aldehydes using catalysts containing groups 8 to 10 elements and phosphonites)

IT Aldehydes, preparation
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for producing aldehydes using catalysts containing groups 8 to 10 elements and phosphonites)

IT 12097-36-8 70135-06-7 70146-21-3 70240-08-3 133305-32-5
197570-46-0 197570-47-1 197570-48-2 214120-50-0 214120-51-1

214120-52-2 214120-53-3 214120-54-4
 RL: CAT (Catalyst use); USES (Uses)
 (process for producing aldehydes)
 IT 197570-45-9P 214120-48-6P
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
 USES (Uses)
 (process for producing aldehydes)
 IT 78-84-2P, Isobutyraldehyde 123-72-8P, Butyraldehyde
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
 (Preparation)
 (process for producing aldehydes)
 IT 115-07-1, 1-Propene, reactions 630-08-0, Carbon monoxide, reactions
 1333-74-0, Hydrogen, reactions 1806-29-7, 2,2'-Dihydroxybiphenyl
 7001-04-9, 2,4-Di-tert-butyl-6-phenylphenol 22749-43-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (process for producing aldehydes)
 RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Eastman Kodak Company; US 4400547 A 1983 HCAPLUS
 (2) Mitsubishi Chemical Corp; US 5600032 A 1996 HCAPLUS
 (3) Mitsubishi Chemical Corp; US 5712403 A 1996 HCAPLUS
 (4) Mitsubishi Chemical Corp; JP 873389 A 1996
 (5) Mitsubishi Chemical Corp; JP 09255610 A 1997 HCAPLUS
 (6) Mitsubishi Chemical Corp; JP 09268152 A 1997 HCAPLUS
 IT 214120-52-2
 RL: CAT (Catalyst use); USES (Uses)
 (process for producing aldehydes)
 RN 214120-52-2 HCAPLUS
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis(2,1-phenyleneoxy)]bis-
 (9CI) (CA INDEX NAME)



L22 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1994:484864 HCAPLUS
 DN 121:84864
 ED Entered STN: 20 Aug 1994
 TI Polymer compositions with good stability to heat and light
 IN Haruna, Tooru; Hida, Etsuo; Hamada, Rieko
 PA Asahi Denka Kogyo KK, Japan
 SO Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08K005-5393
 ICS C08K005-3475; C08L101-00

CC 37-6 (Plastics Manufacture and Processing)

FAN.CNT 1

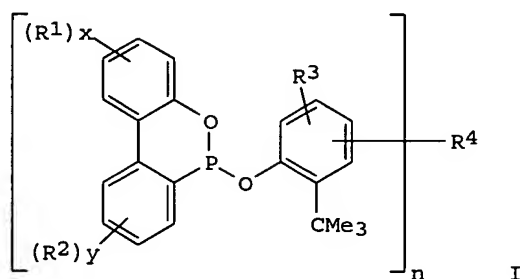
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05331313	A2	19931214	JP 1992-140790	19920601
PRAI	JP 1992-140790		19920601		

CLASS

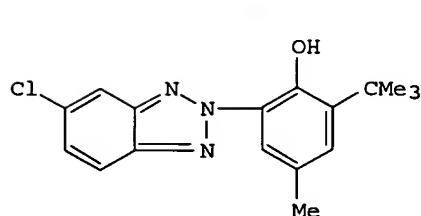
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 05331313	ICM	C08K005-5393
	ICS	C08K005-3475; C08L101-00

OS MARPAT 121:84864

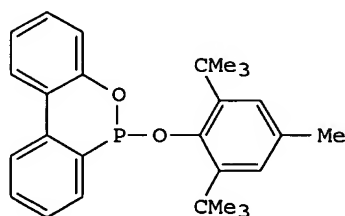
GI



I



II



III

AB The title comps. contain polymers 100, phosphonites I 0.001-5, and 2-(2-hydroxyphenyl)benzotriazoles with ≥ 300 mol. weight 0.001-5 parts [R1, R2 = (un)substituted hydrocarbyl, halogen; x, y = 0-3, n = 1-3; R3 = H, C1-4 hydrocarbyl; R4 = (un)substituted aliphatic or aromatic aliphatic hydrocarbyl]. Thus, ethylene-propylene block copolymer 100, Ca stearate 0.05, pentaerythritol tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate] 0.1, II 0.1, and III 0.1 part were melt kneaded, pelletized, and injection molded at 250° to give test pieces showing (initially and after 5 repeated injection, resp.) melt flow rate 2.19 and 3.31 g/10-min, yellow index 4.31 and 6.01, discoloration (yellow index) 6.26 initially and 8.23 after 72 h at 150°, and gloss 73 with 98% retention after 1500 h in a sunshine weatherometer.

ST polymer compn phosphonite benzotriazole weatherability; heat stable polymer compn; light stable polymer compn; discoloration resistant polymer phosphonite benzotriazole

IT Polycarbonates, miscellaneous

RL: MSC (Miscellaneous)

(comps., containing phosphonites and benzotriazoles, heat- and light-stable)

IT Light stabilizers

(heat and, phosphonites and benzotriazoles, for polymers)

IT Heat stabilizers

(light and, phosphonites and benzotriazoles, for polymers)

IT Discoloration prevention

(of polymer comps., by phosphonites and benzotriazoles)

IT 25038-59-9, uses 25120-20-1, Acrylonitrile-butadiene- α -

methylstyrene-styrene copolymer 106565-43-9, Ethylene-propylene block copolymer

RL: USES (Uses)

(compns., containing phosphonites and benzotriazoles, heat- and light-stable)

IT 149963-04-2

RL: USES (Uses)

(crosslinked, compns., containing phosphonites and benzotriazoles, heat- and light-stable not: Almatex 110 is acrylic resin coating (Mitsui Toatsu Chems., Inc.))

IT 35948-28-8 70135-03-4 83937-13-7 83937-14-8

152552-72-2 155343-18-3

RL: USES (Uses)

(polymer compns. containing, with benzotriazoles, for heat and light stability)

IT 155343-10-5 155343-11-6 155343-12-7 155343-13-8 155343-14-9

155343-15-0 155343-16-1 155343-17-2

RL: USES (Uses)

(polymer compns. containing, with phosphonites, for heat and light stability)

IT 83937-13-7 152552-72-2 155343-18-3

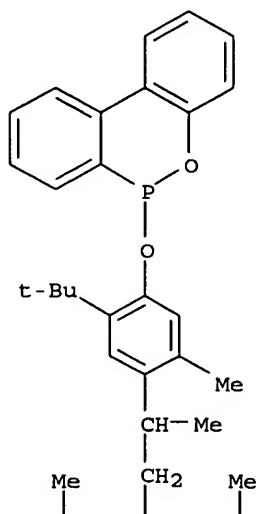
RL: USES (Uses)

(polymer compns. containing, with benzotriazoles, for heat and light stability)

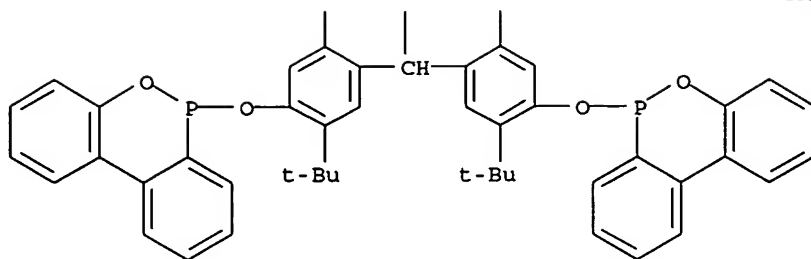
RN 83937-13-7 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6',6''-[(1-methyl-1-propanyl-3-ylidene)tris[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]tris-(9CI) (CA INDEX NAME)

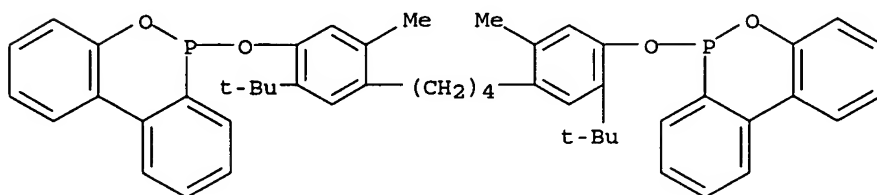
PAGE 1-A



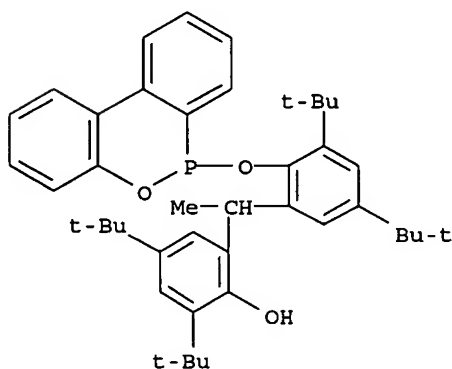
PAGE 2-A



RN 152552-72-2 HCAPLUS
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[1,4-butanediylbis[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



RN 155343-18-3 HCAPLUS
 CN Phenol, 2-[1-[2-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-3,5-bis(1,1-dimethylethyl)phenyl]ethyl]-4,6-bis(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



L22 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1994:78669 HCAPLUS
 DN 120:78669
 ED Entered STN: 19 Feb 1994
 TI Rubber-modified styrene polymer compositions
 IN Haruna, Tooru; Hida, Etsuo; Hamada, Rieko
 PA Asahi Denka Kogyo KK, Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08L025-00
 ICS C08K005-13; C08K005-53; C08L051-04
 CC 37-6 (Plastics Manufacture and Processing)

Search done by Noble Jarrell

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05222256	A2	19930831	JP 1992-28406	19920214
PRAI	JP 1992-28406		19920214		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 05222256	ICM	C08L025-00
	ICS	C08K005-13; C08K005-53; C08L051-04

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title compns. with good heat resistance, weatherability, and appearance contain 0.001-5 phr phosphonite compds. I [R1-2 = C1-8 (un)substituted hydrocarbyl, halo; R3 = H, C1-4 alkyl; R4 = (un)substituted aliphatic or aromatic hydrocarbyl; x, y = 0-3; n = 1-3] and 0.01-5 phr phenol compds. II [R5-7 = H, C1-4 alkyl; R8 = H, Q]. Thus, a composition comprising high-impact polystyrene 100, ethylenebis(stearamide) 0.4, phosphonite compound III 0.15, and 4,4'-butylidenebis(6-tert-butyl-m-cresol) 0.15 part was melt kneaded, pelletized, and injection molded to give actest piece showing Izod impact strength 7.2 initially and 6.3 after 2-wk aging at 110° and yellowness index 12.0 initially and 15.6 after the aging.

ST phosphonite phenol polystyrene discoloration prevention;
butylidenebisbutylcresol phosphonite stabilizer polystyrene

IT Heat stabilizers
(phosphonite compds. and phenol derivs., for rubber-modified polystyrene)

IT Phenols, uses
RL: USES (Uses)
(stabilizers, phosphonite compds. and, for rubber-modified polystyrene, for good discoloration resistance)

IT Discoloration prevention
(agents, phosphonite compds. and phenol derivs., for rubber-modified polystyrene)

IT 100-42-5D, Styrene, rubber-modified polymers
RL: USES (Uses)
(stabilizers for, phosphonite compds. and phenol derivs. as, with good impact and discoloration resistance)

IT 35948-28-8 70135-03-4 83937-13-7 83937-14-8
152552-71-1 152552-72-2
RL: USES (Uses)
(stabilizers, phenol derivs. and, for rubber-modified polystyrene, for good discoloration resistance)

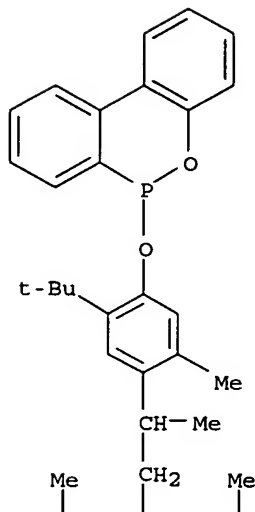
IT 85-60-9, 4,4'-Butylidenebis(6-tert-butyl-m-cresol) 1843-03-4
RL: USES (Uses)
(stabilizers, phosphonite compds. and, for rubber-modified polystyrene, for good discoloration resistance)

IT 83937-13-7 152552-71-1 152552-72-2
RL: USES (Uses)
(stabilizers, phenol derivs. and, for rubber-modified polystyrene, for good discoloration resistance)

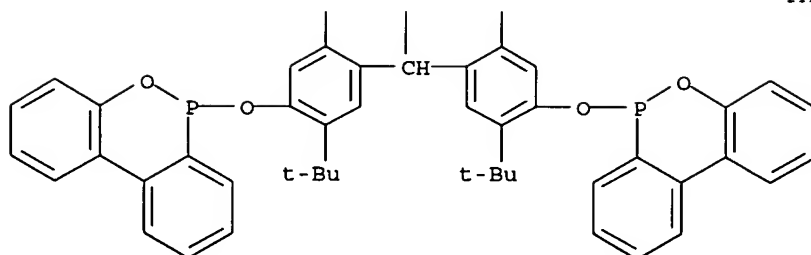
RN 83937-13-7 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6',6'-[(1-methyl-1-propanyl-3-ylidene)tris[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]tris-(9CI) (CA INDEX NAME)

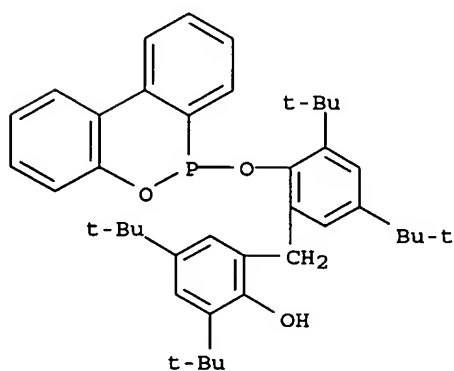
PAGE 1-A



PAGE 2-A

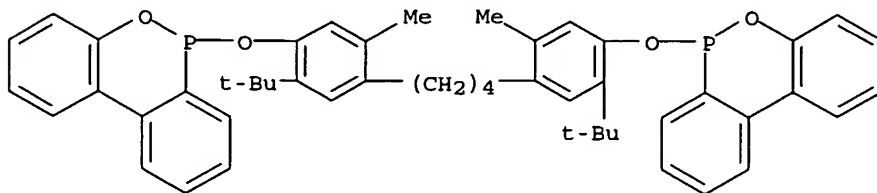


RN 152552-71-1 HCAPLUS
 CN Phenol, 2-[[2-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-3,5-bis(1,1-dimethylethyl)phenyl]methyl]-4,6-bis(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



Search done by Noble Jarrell

RN 152552-72-2 HCAPLUS
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[1,4-butanediylbis[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



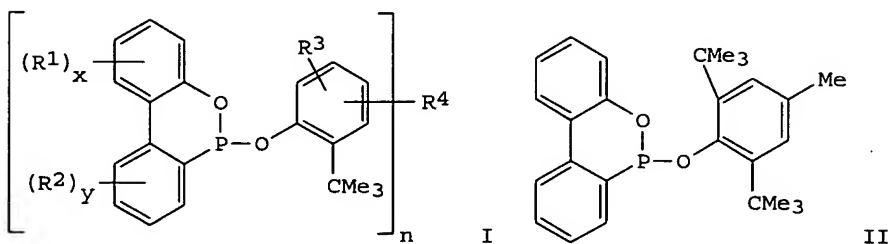
L22 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1994:78668 HCAPLUS
 DN 120:78668
 ED Entered STN: 19 Feb 1994
 TI Polyolefin compositions with improved discoloration resistance
 IN Haruna, Toru; Hida, Etsuo; Hamada, Rieko
 PA Asahi Denka Kogyo KK, Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08L023-00
 ICS C08K003-26; C08K005-5393
 CC 37-6 (Plastics Manufacture and Processing)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05222250	A2	19930831	JP 1992-28405	19920214
	JP 3248625	B2	20020121		
PRAI	JP 1992-28405		19920214		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 05222250	ICM	C08L023-00
	ICS	C08K003-26; C08K005-5393

GI



AB The title compns. with good resistance to heat and light contain 0.005-5 phr phosphonite compds. I [R1-2 = C1-8 (un)substituted hydrocarbyl, halo; R3 = H, C1-4 alkyl; R4 = (un)substituted aliphatic or aromatic hydrocarbyl; x, y = 0-3; n = 1-3] and 0.005-5 phr hydrotalcites. Thus, a composition comprising ethylene-propylene block copolymer 100, pentaerythritol tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate] 0.1, DHT 4A [Mg4.5Al2(OH)13.CO3.3.5H2O] 0.1, and phosphonite compds. II 0.1 part was injection molded at 250° to give a test piece showing melt flow rate 2.36 g/10-min, yellowness index 4.52 initially and 5.15 after 72 h at 150°.

Search done by Noble Jarrell

ST phosphonite hydrotalcite polyolefin discoloration prevention; ethylene
propylene copolymer discoloration resistance

IT Heat stabilizers
(phosphonite compds. and hydrotalcites, for polyolefins)

IT Discoloration prevention
(agents, phosphonite compds. and hydrotalcites, for polyolefins)

IT Alkenes, polymers
RL: USES (Uses)
(polymers, discoloration inhibitors for, phosphonite compds. and
hydrotalcites as)

IT 106565-43-9, Ethylene-propylene block copolymer
RL: USES (Uses)
(discoloration inhibitors for, phosphonite compds. and hydrotalcites
as)

IT 119758-00-8, Alcamizer 4
RL: USES (Uses)
(polyolefins containing, Alcamizer 4, phosphonite compds. and, for good
discoloration resistance)

IT 11097-59-9, DHT 4A
RL: USES (Uses)
(polyolefins containing, DHT 4A, phosphonite compds. and, for good
discoloration resistance)

IT 35948-28-8 70135-03-4 83937-13-7 83937-14-8
152552-71-1 152552-72-2
RL: USES (Uses)
(polyolefins containing, hydrotalcites and, for good discoloration
resistance)

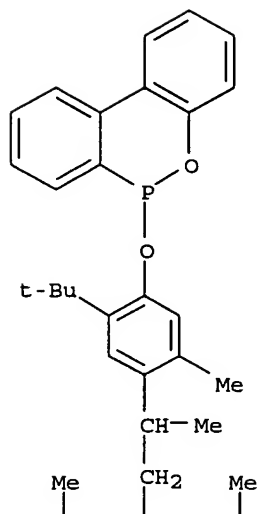
IT 12304-65-3, DHT 4A2 12539-23-0, Alcamizer 1
RL: USES (Uses)
(polyolefins containing, phosphonite compds. and, for good discoloration
resistance)

IT 83937-13-7 152552-71-1 152552-72-2
RL: USES (Uses)
(polyolefins containing, hydrotalcites and, for good discoloration
resistance)

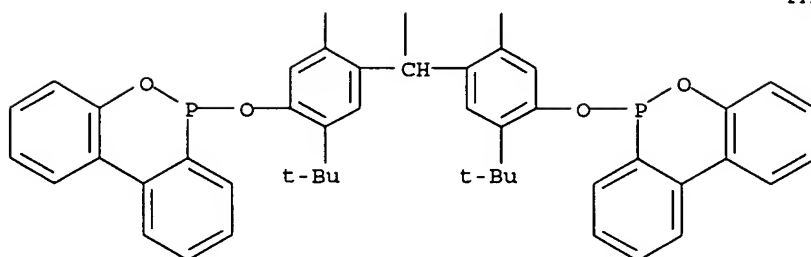
RN 83937-13-7 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6',6''-[(1-methyl-1-propanyl-3-
ylidene)tris[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]tris-
(9CI) (CA INDEX NAME)

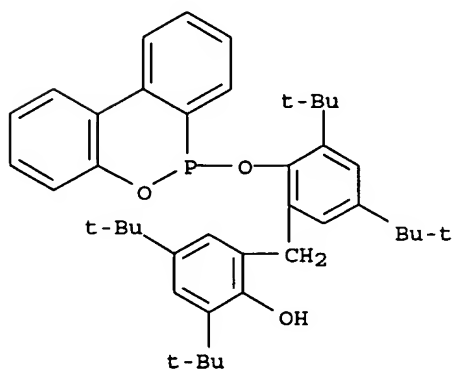
PAGE 1-A



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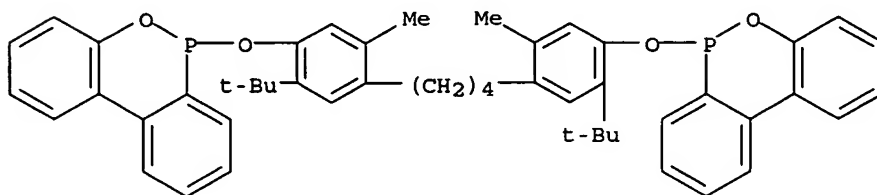


RN 152552-71-1 HCAPLUS
 CN Phenol, 2-[[2-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-3,5-bis(1,1-dimethylethyl)phenyl]methyl]-4,6-bis(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



Search done by Noble Jarrell

RN 152552-72-2 HCAPLUS
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[1,4-butanediylbis[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



L22 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1987:599579 HCAPLUS

DN 107:199579

ED Entered STN: 27 Nov 1987

TI Epoxy resin compositions

IN Saruwatari, Koichi

PA Sanko Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08G059-42

ICS C08L063-00

CC 37-6 (Plastics Manufacture and Processing)

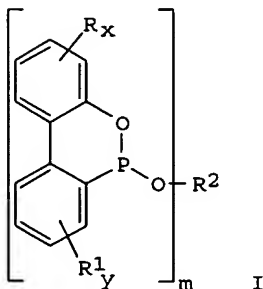
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62070414	A2	19870331	JP 1985-210224	19850925
	JP 04010899	B4	19920226		
PRAI	JP 1985-210224		19850925		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 62070414	ICM	C08G059-42
	ICS	C08L063-00

GI



AB Compns. giving durable cured products contain (a) epoxy resins, (b) organic polybasic anhydrides, (c) hardening accelerators, and (d) organic P compds. I [R, R1 = halogen, halogen- or alkyl-substituted alkyl, aryl, aralkyl; R2 = OH-free organic residue; x, y = 0-3; m = 1-10] at weight ratios d/(a+b+c) = (0.1-20)/100. Thus, methylhexahydrophthalic anhydride 100, benzyldimethylamine 1, and I (R = R1 = H, R2 = C10H21, m = 1) (II) 2 g were mixed to prepare a liquid hardening agent, which was uniformly mixed with 100 g Araldite GY 250 (epoxy resin) and cured at 130° for 30 min.

The cured product showed water-whiteness and transparency both initially and after kept at 100° for 1000 h, compared with water-whiteness and somewhat discoloration, and severe discoloration, resp. for a cured product without II.

ST transparency cured epoxy resin; methylhexahydrophthalic anhydride hardener epoxy resin; org phosphorus compd heat stabilizer; oxaphosphaphenanthrene deriv heat stabilizer epoxy

IT Transparent materials

(anhydride-crosslinked epoxy resins, heat stabilizers for, oxaphosphaphenanthrene derivs. as)

IT Epoxy resins, uses and miscellaneous

RL: USES (Uses)

(anhydride-crosslinked, transparent, heat stabilizers for, oxaphosphaphenanthrene derivs. as)

IT Heat stabilizers

(oxaphosphaphenanthrene derivs., for transparent epoxy resins)

IT 52458-38-5 70135-06-7 73269-03-1 83937-12-6 110546-14-0

RL: MOA (Modifier or additive use); USES (Uses)

(heat stabilizers, for transparent epoxy resins)

IT 110835-63-7

RL: USES (Uses)

(transparent, heat stabilizers for, oxaphosphaphenanthrene derivs. as)

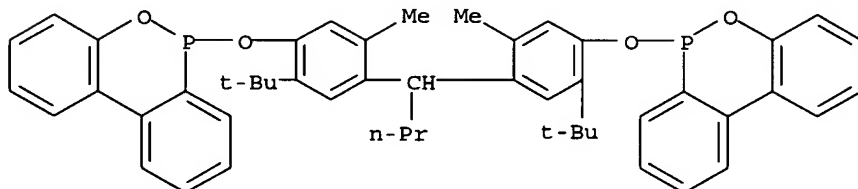
IT 83937-12-6

RL: MOA (Modifier or additive use); USES (Uses)

(heat stabilizers, for transparent epoxy resins)

RN 83937-12-6 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[butylidenebis[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



L22 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1983:489101 HCAPLUS

DN 99:89101

ED Entered STN: 12 May 1984

TI White polyoxyphenylene compositions

PA Asahi-Dow Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C08L071-04; C08K003-22; C08L025-04

CC 37-6 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58021444	A2	19830208	JP 1981-119366	19810731
PRAI	JP 1981-119366		19810731		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
AB	JP 58021444	IC	C08L071-04IC C08K003-22IC C08L025-04

Poly[oxy(2,6-dimethyl-1,4-phenylene)] (I) [24938-67-8] compns. having whiteness (LAB) >89 contain I 20-60, rubbery polymer 3-10, TiO₂ 13-26, organic phosphonite 0.5-2.0, and polystyrene (II) [9003-53-6] 2.0-63.5%. Thus, a composition from I 30, high-impact II (containing 9% polybutadiene) 55, I

15, 10-(decyloxy)-9,10-dihydro-9-oxa-10-phosphaphenanthrene [52458-38-5]
 2, 1,3,5-tris(3,5-di-tert-butyl-4-hydroxybenzyl)-s-triazine-1H,3H,5H-trione 0.75, and TiO₂ 25 parts gave an injection molding with whiteness 91, tensile strength 430 kg/cm², elongation 25%, heat distortion temperature 107°, and Izod impact strength 9 kg-cm/cm.

ST polyoxyphenylene blend whiteness; butadiene rubber polyoxyphenylene blend; polystyrene polyoxyphenylene blend; phosphonite white polyoxyphenylene blend; phosphaphenanthrene white polyoxyphenylene blend; titania white polyoxyphenylene blend

IT Polyoxyphenylenes
 RL: USES (Uses)
 (blends with polystyrene and rubbers, containing organic phosphonites and titanium dioxide, white)

IT Rubber, butadiene, uses and miscellaneous
 Rubber, butadiene-styrene, uses and miscellaneous
 Rubber, ethylene-propene
 Rubber, synthetic
 RL: USES (Uses)
 (in white polyoxyphenylene compns. containing titanium dioxide)

IT Plastics
 RL: USES (Uses)
 (polyoxyphenylene-polystyrene-rubber blends, containing organic phosphonites and titanium dioxide, white)

IT Rubber, synthetic
 RL: USES (Uses)
 (EPDM, in white polyoxyphenylene compns. containing titanium dioxide)

IT 24938-67-8 25134-01-4
 RL: USES (Uses)
 (blends with polystyrene and rubbers, containing organic phosphonites and titanium dioxide, white)

IT 9002-88-4 9003-29-6 9019-29-8 24937-78-8 25101-13-7 25102-52-7
 26602-62-0 35948-27-7 38613-77-3 52458-38-5 70135-00-1
 70135-06-7 70135-11-4 83937-08-0 83937-13-7
 RL: USES (Uses)
 (in white polyoxyphenylene compns. containing titanium dioxide)

IT 9003-53-6
 RL: PRP (Properties)
 (polyoxyphenylene blends, containing titanium dioxide, white)

IT 13463-67-7, uses and miscellaneous
 RL: USES (Uses)
 (polyoxyphenylene compns. containing, white)

IT 9003-55-8
 RL: USES (Uses)
 (rubber, butadiene-styrene; in white polyoxyphenylene compns. containing titanium dioxide)

IT 9003-17-2
 RL: USES (Uses)
 (rubber, butadiene; in white polyoxyphenylene compns. containing titanium dioxide)

IT 9010-79-1
 RL: USES (Uses)
 (rubber, ethylene-propene; in white polyoxyphenylene compns. containing titanium dioxide)

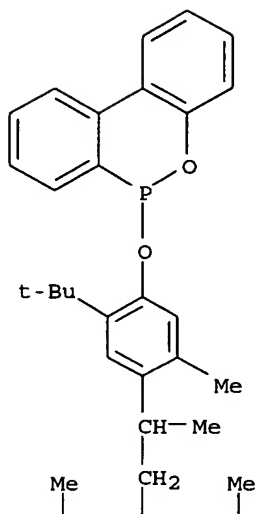
IT 9046-49-5 25034-71-3 25038-36-2
 RL: USES (Uses)
 (rubber, in white polyoxyphenylene compns. containing titanium dioxide)

IT 83937-13-7
 RL: USES (Uses)
 (in white polyoxyphenylene compns. containing titanium dioxide)

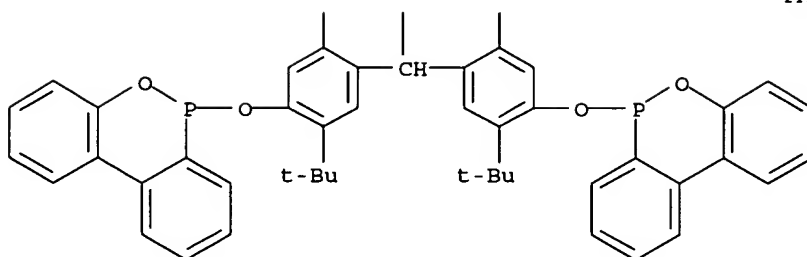
RN 83937-13-7 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6',6''-[(1-methyl-1-propanyl-3-ylidene)tris[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]tris-(9CI) (CA INDEX NAME)

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L22 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1983:35523 HCAPLUS

DN 98:35523

ED Entered STN: 12 May 1984

TI Cyclic phosphonite stabilizers

PA Asahi-Dow Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C08L101-00; C08K005-53

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 29

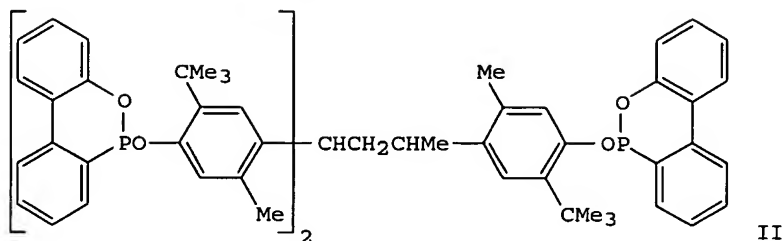
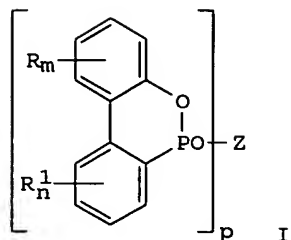
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57105456	A2	19820630	JP 1980-179720	19801220
PRAI	JP 1980-179720		19801220		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
-----	-----	-----

JP 57105456 IC C08L101-00IC C08K005-53
GI



- AB Phosphonites (I; R,R1 = H, halogen, C1-18 alkyl, C1-18 alkoxy, aryl, aryloxy; m,n = 0-4; Z = p-valent group, p ≥ 2) are useful as stabilizers for organic substances. Thus, 0.1 part yellowish highly viscous phosphonite (II) [83937-13-7] and 0.3 part octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate were mixed with 100 parts ABS resin [9003-56-9]; the mixture was extruded and pelletized. A test specimen molded at >80° had impact strength 86% that of a specimen molded at >40°. For comparison, the ratio was 71% when II was replaced by tris(nonylphenyl) phosphite.
- ST cyclic phosphonite stabilizer ABS resin; benzoxaphosphorin deriv stabilizer; stabilizer org substance cyclic phosphonite
- IT Heat stabilizers
(cyclic phosphonite esters and polyols, for polymers)
- IT Polycarbonates
RL: USES (Uses)
(stabilizers for, cyclic phosphonite esters and polyols as)
- IT 9002-86-2 9002-88-4 9003-56-9 25038-59-9, uses and miscellaneous
32131-17-2, uses and miscellaneous
RL: USES (Uses)
(stabilizers for, cyclic phosphonite esters and polyols as)
- IT 83954-01-2
RL: MOA (Modifier or additive use); USES (Uses)
(stabilizers, for PVC)
- IT 84139-28-6
RL: USES (Uses)
(stabilizers, for polyamides)
- IT 83937-12-6
RL: USES (Uses)
(stabilizers, for polycarbonates)
- IT 84139-29-7
RL: USES (Uses)
(stabilizers, for polyesters)
- IT 83937-17-1
RL: USES (Uses)
(stabilizers, for polyethylene)
- IT 83937-13-7P
RL: PREP (Preparation)
(stabilizers, manufacture of, for ABS resin)
- IT 1843-03-4

RL: RCT (Reactant); RACT (Reactant or reagent)
(transesterification by, of phenoxydibenzoxaphosphorin)

IT 35948-27-7

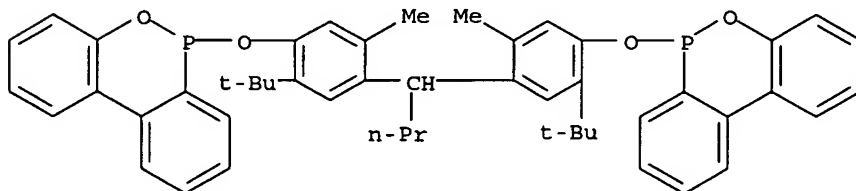
RL: RCT (Reactant); RACT (Reactant or reagent)
(transesterification of, with trisphenols)

IT 83937-12-6

RL: USES (Uses)
(stabilizers, for polycarbonates)

RN 83937-12-6 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[butylidenebis[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)

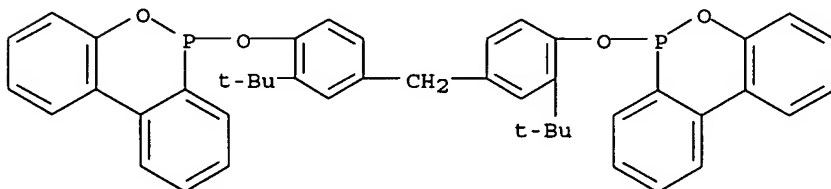


IT 84139-29-7

RL: USES (Uses)
(stabilizers, for polyesters)

RN 84139-29-7 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[[2-(1,1-dimethylethyl)-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



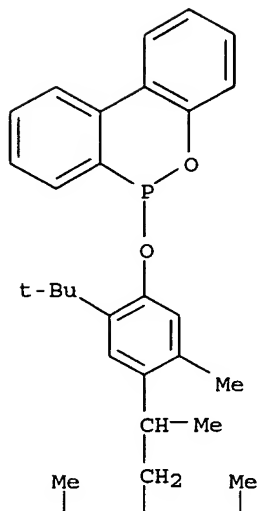
IT 83937-13-7P

RL: PREP (Preparation)
(stabilizers, manufacture of, for ABS resin)

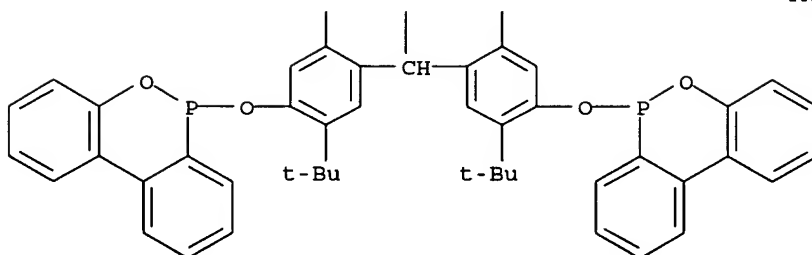
RN 83937-13-7 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6',6''-[(1-methyl-1-propanyl-3-ylidene)tris[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]tris- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



L22 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1983:17530 HCAPLUS

DN 98:17530

ED Entered STN: 12 May 1984

TI Heat-resistant polyoxyphenylene blends

PA Asahi-Dow Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C08L071-04; C08K005-53; C08L025-04

ICI C08L071-04, C08L025-04, C08L021-00

CC 37-6 (Plastics Manufacture and Processing)

FAN.CNT 1

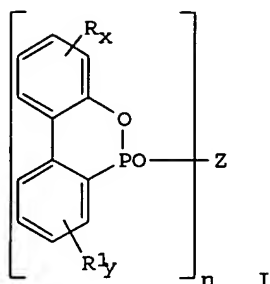
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 57105451	A2	19820630	JP 1980-179712	19801220
PRAI JP 1980-179712		19801220		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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Search done by Noble Jarrell

JP 57105451 IC C08L071-04IC C08K005-53IC C08L025-04
 GI ICI C08L071-04, C08L025-04, C08L021-00



- AB Impact-modified polyoxoxyphenylene compns. consisting of polyoxoxyphenylene 20-90, rubber 0-30, and styrene polymer 10-80% were compounded 94-99.9:6-0.1 with I (R, R1 = hydrocarbon group optionally containing halogen substituents; Z = residue of a compound containing m-OH groups; x, y = 0-3; m = 2-10) for improved heat resistance. For example, poly[oxy2,6-dimethyl-1,4-phenylene] [24938-67-8] 45, high-impact polystyrene [9003-53-6] (containing 4% butadiene rubber) 55, and I (R,R1 = H; Z = 4-tert-butyl-1,3-phenylene; m = 2) (II) [83937-44-4] 1 part were blended and extruded at 200-90° to give a specimen with Hunter color difference (from control) 6.8, heat-distortion temperature 114°, tensile strength 4.78 kg/mm, Izod impact strength 20 kg-cm/cm, and elongation 58%, compared with -, 114, 4.30, 16, and 28, resp., for a control not containing II.
- ST oxaphosphaphenanthrene heat stabilizer polyoxoxyphenylene blend; polystyrene polyoxoxyphenylene blend heat stabilizer; rubber polyoxoxyphenylene blend heat stabilizer
- IT Heat stabilizers
 (oxaphosphaphenanthrene derivs., for impact-modified polyoxoxyphenylene blends)
- IT Rubber, butadiene, uses and miscellaneous
 Rubber, butadiene-styrene, uses and miscellaneous
 Rubber, ethylene-propene
 Rubber, nitrile, uses and miscellaneous
 Rubber, synthetic
 RL: USES (Uses)
 (polyoxoxyphenylene blends, impact-resistant, heat stabilizers for)
- IT Polyoxoxyphenylenes
 RL: USES (Uses)
 (styrene polymer blend, impact-resistant, heat stabilizers for, oxaphosphaphenanthrene derivs. as)
- IT 73269-03-1 83937-12-6 83937-13-7 83937-17-1
 83937-39-7 83937-40-0 83937-41-1 83937-42-2 83937-43-3
 83937-44-4 83954-01-2
 RL: MOA (Modifier or additive use); USES (Uses)
 (heat stabilizers, for impact-modified polyoxoxyphenylene blends)
- IT 25034-86-0 25035-81-8 25085-34-1 25213-88-1 25586-23-6
 25767-39-9 29353-33-1 30050-69-2 39410-02-1
 RL: USES (Uses)
 (polyoxoxyphenylene blends, for impact-resistant, heat stabilizers for, oxaphosphaphenanthrene derivs. as)
- IT 9003-53-6 9003-54-7 9011-11-4 9011-13-6
 RL: PRP (Properties)
 (polyoxoxyphenylene blends, for impact-resistant, heat stabilizers for, oxaphosphaphenanthrene derivs. as)
- IT 25053-09-2
 RL: USES (Uses)
 (polyoxoxyphenylene blends, impact-resistant, heat stabilizers for, oxaphosphaphenanthrene derivs. as)

IT 9003-55-8
 RL: USES (Uses)
 (rubber, butadiene-styrene; polyoxyphenylene blends, impact-resistant, heat stabilizers for)

IT 9003-17-2
 RL: USES (Uses)
 (rubber, butadiene; polyoxyphenylene blends, impact-resistant, heat stabilizers for)

IT 9010-79-1
 RL: USES (Uses)
 (rubber, ethylene-propene; polyoxyphenylene blends, impact-resistant, heat stabilizers for)

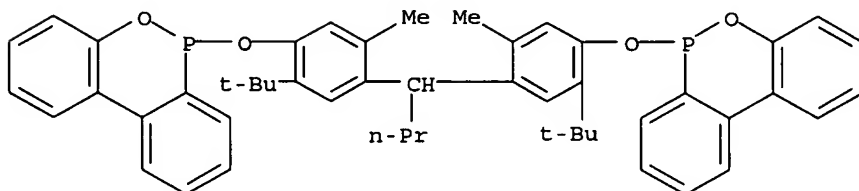
IT 9003-18-3
 RL: USES (Uses)
 (rubber, nitrile; polyoxyphenylene blends, impact-resistant, heat stabilizers for)

IT 9002-88-4 9003-29-6 9019-29-8 24937-78-8 25034-71-3 25038-32-8
 25038-36-2 25101-13-7 25102-52-7 26602-62-0 81987-13-5
 83932-38-1
 RL: USES (Uses)
 (rubber, polyoxyphenylene blends, impact-resistant, heat stabilizers for, oxaphosphaphenanthrene derivs. as)

IT 24938-67-8 25134-01-4
 RL: USES (Uses)
 (styrene polymer blend, impact-resistant, heat stabilizers for, oxaphosphaphenanthrene derivs. as)

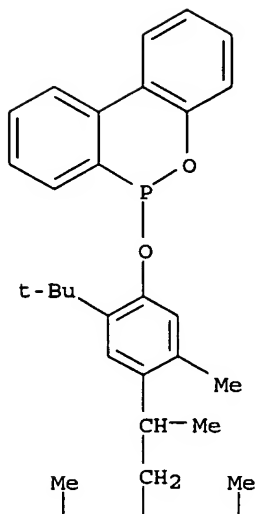
IT 83937-12-6 83937-13-7 83937-41-1
 RL: MOA (Modifier or additive use); USES (Uses)
 (heat stabilizers, for impact-modified polyoxyphenylene blends)

RN 83937-12-6 HCAPLUS
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[butylidenebis[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)

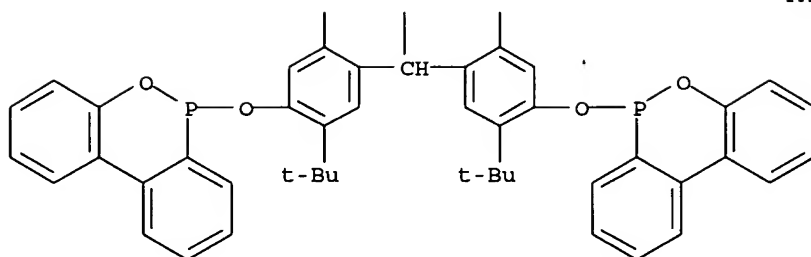


RN 83937-13-7 HCAPLUS
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6',6''-[(1-methyl-1-propanyl-3-ylidene)tris[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]tris- (9CI) (CA INDEX NAME)

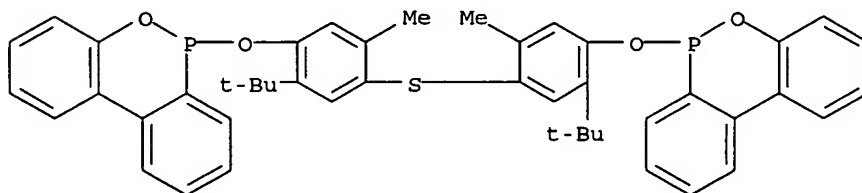
PAGE 1-A



PAGE 2-A



RN 83937-41-1 HCAPLUS
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[thiobis[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



L22 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1983:5082 HCAPLUS
 DN 98:5082
 ED Entered STN: 12 May 1984
 TI Light-resistant polyoxyphenylene blends
 PA Asahi-Dow Ltd., Japan

Search done by Noble Jarrell

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C08L071-04; C08K005-50; C08K005-53; C08L025-04

ICI C08L071-04, C08L025-04, C08L021-00

CC 37-6 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57105452	A2	19820630	JP 1980-179715	19801220
PRAI	JP 1980-179715		19801220		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 57105452	IC	C08L071-04IC C08K005-50IC C08K005-53IC C08L025-04 ICI C08L071-04, C08L025-04, C08L021-00

AB Impact-modified polyoxyphenylene compns. consisting of a polyoxyphenylene 20-60, an elastomeric polymer 0-30, and a styrene polymer 40-80% were incorporated, for improved light resistance with an aryl phosphonite 0.1-3, a UV absorber 0.1-3, and a sterically hindered phenol 0-2% (based on the final composition), with the total stabilizer content being 0.2-8%. Thus, an extrusion-molded specimen from poly[oxy(2,6-dimethyl-1,4-phenylene)] [24938-67-8] 35, high-impact polystyrene [9003-53-6] 65, 10-(2,6-di-tert-butylphenoxy)-9,10-dihydro-9-oxa-10-phosphaphenanthrene (I) [9003-29-6] 10, and 2-(2-hydroxy-5-methylphenyl)benzotriazole [2440-22-4] 0.75 part had Izod impact strength 19 kg-cm/cm and impact strength retention (after 200 h in a weatherometer 63° and relative humidity 50%) 83%, compared with 19 and 63, resp., for a control not containing I.

ST polyoxyphenylene polystyrene blend light stabilizer; phosphonite light stabilizer polyoxyphenylene blend; phosphaphenanthrene light stabilizer polyoxyphenylene blend; phenolic light stabilizer polyoxyphenylene blend; benzotriazole light stabilizer polyoxyphenylene blend

IT Light stabilizers

(aryl phosphonites and UV absorbers and hindered phenols, for polyoxyphenylene blends)

IT Polyoxyphenylenes

RL: USES (Uses)

(impact-modified, light stabilizers for)

IT Phenols, uses and miscellaneous

RL: USES (Uses)

(light stabilizers containing, for impact-modified polyoxyphenylene blends)

IT Rubber, butadiene, uses and miscellaneous

Rubber, butadiene-styrene, uses and miscellaneous

Rubber, nitrile, uses and miscellaneous

Rubber, synthetic

RL: USES (Uses)

(polyoxyphenylene blends, impact-resistant, light stabilizers for)

IT 24938-67-8 25134-01-4

RL: USES (Uses)

(impact-modified, light stabilizers for)

IT 13410-61-2 35948-27-7 35948-28-8 38613-77-3 52458-38-5

70135-00-1 70135-06-7 70135-11-4 70146-21-3 83896-38-2

83923-62-0 83923-63-1 83923-64-2 83923-65-3 83937-04-6

83937-05-7 83937-06-8 83937-07-9 83937-08-0 83937-09-1

83937-10-4 83937-47-7 83953-98-4

RL: USES (Uses)

(light stabilizers containing, for impact-modified polyoxyphenylene blends)

IT 79-74-3 85-28-9 85-60-9 88-24-4 88-58-4 90-68-6 94-01-9

96-66-2 96-69-5 118-55-8 118-82-1 119-47-1 128-37-0, uses and

miscellaneous 131-54-4 131-55-5 131-56-6 131-57-7 976-56-7

991-84-4 1620-93-5 1709-70-2 1843-03-4 1843-05-6 2082-79-3

2162-63-2 2440-22-4 2658-23-3 2985-59-3 3135-18-0 3147-76-0

3147-77-1 3846-71-7 3864-99-1 3896-11-5 4192-61-4 5188-31-8

6683-19-8 13676-82-9 14894-91-8 15188-12-2 15618-85-6 17831-67-3
 18824-08-3 22607-31-4 22617-00-1 23128-74-7 25973-55-1
 27479-27-2 27676-62-6 30590-53-5 30596-65-7 30596-66-8
 32509-66-3 33145-10-7 34137-09-2 35074-76-1 35074-77-2
 36437-37-3 38080-24-9 38358-77-9 41484-35-9 57569-40-1
 60699-47-0 70135-03-4 74734-21-7 83937-11-5 83937-12-6
 83937-13-7 83937-14-8 83937-15-9 83937-16-0
 83937-17-1 83937-18-2 83937-19-3 83937-20-6 83937-21-7
 83953-99-5 83954-00-1

RL: USES (Uses)

(light stabilizers, for impact-modified polyoxyphenylene blends)

IT 9002-88-4 25034-86-0 25035-81-8 25213-88-1 25586-23-6 25767-39-9
 29353-33-1 30050-69-2 39410-02-1

RL: USES (Uses)

(polyoxyphenylene blends, impact-resistant, light stabilizers for)

IT 9003-53-6 9003-54-7 9003-55-8 9003-55-8D, hydrogenated 9011-11-4
 9011-13-6

RL: PRP (Properties)

(polyoxyphenylene blends, impact-resistant, light stabilizers for)

IT 9003-17-2

RL: USES (Uses)

(rubber, butadiene; polyoxyphenylene blends, impact-resistant, light stabilizers for)

IT 9003-18-3

RL: USES (Uses)

(rubber, nitrile; polyoxyphenylene blends, impact-resistant, light stabilizers for)

IT 9003-29-6 9019-29-8 9046-49-5 24937-78-8 25038-32-8 25038-36-2
 25101-13-7 25102-52-7 26602-62-0 81987-13-5 83932-38-1

RL: USES (Uses)

(rubber, polyoxyphenylene blends, impact-resistant, light stabilizers for)

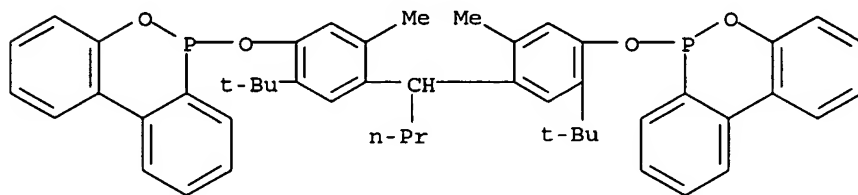
IT 83937-12-6 83937-13-7 83937-15-9

RL: USES (Uses)

(light stabilizers, for impact-modified polyoxyphenylene blends)

RN 83937-12-6 HCAPLUS

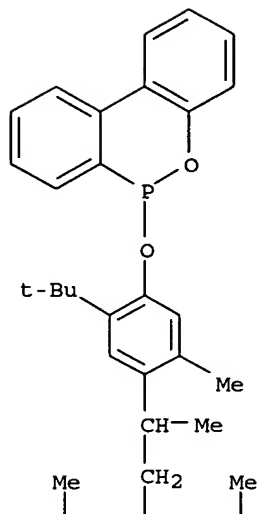
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6',6''-[butylidenebis[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



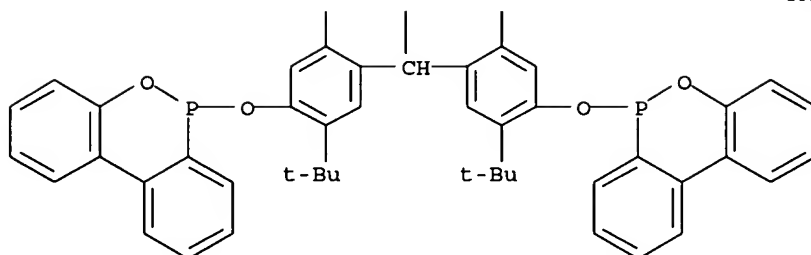
RN 83937-13-7 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6',6''-[(1-methyl-1-propanyl-3-ylidene)tris[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]tris- (9CI) (CA INDEX NAME)

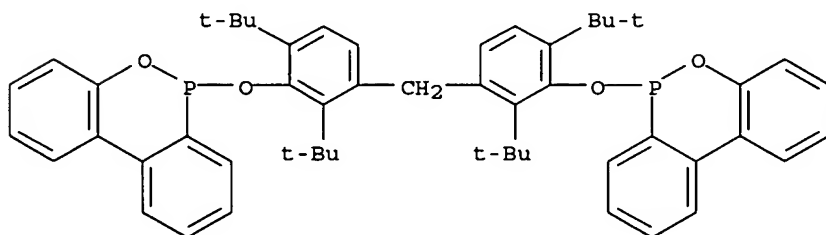
PAGE 1-A



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RN 83937-15-9 HCAPLUS
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[[2,6-bis(1,1-dimethylethyl)-3,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



L22 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1980:146908 HCAPLUS
 DN 92:146908
 ED Entered STN: 12 May 1984
 TI Cyclic phosphonite stabilizers

Search done by Noble Jarrell

IN Rasberger, Michael; Spivack, John D.
 PA Ciba-Geigy Corp., USA
 SO U.S., 11 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC C07F009-48; C07F009-65; C08K005-53
 INCL 260045800N
 CC 29-7 (Organometallic and Organometalloidal Compounds)
 Section cross-reference(s): 35, 36, 37

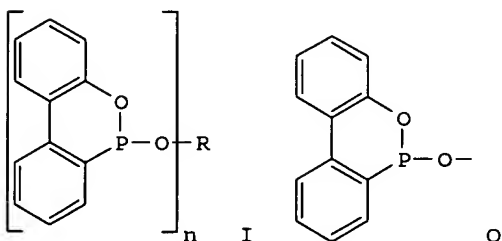
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4185006	A	19800122	US 1978-922394	19780706
	DE 2926897	A1	19800124	DE 1979-2926897	19790703
	JP 55011597	A2	19800126	JP 1979-85814	19790706
PRAI	US 1978-922394	A	19780706		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4185006	IC	C07F009-48IC C07F009-65IC C08K005-53
	INCL	260045800N
US 4185006	NCL	524/100.000; 524/099.000; 524/101.000; 524/106.000; 524/118.000; 524/119.000; 524/310.000; 558/076.000; 558/082.000; 987/045.000; 987/353.000; 987/357.000

GI



AB Eight title phosphonites I (R = an n-valent aliphatic, alicyclic, aromatic or araliph. which may contain N, O or S or heterocyclics; n = 2-6) were prepared by esterification of 6-chlorodibenz[c,e][1,2]oxaphosphorine (II) with a polyol, Q(OH)_n. Thus, 0.1 mol 2,5-di-tert-butylhydroquinone and 0.2 mol II were heated 3 h at 200° to give 2,5-(Me₃C)₂C₆H₂Q₂-1,4. Similarly prepared were [4,3-Q(Me₃C)₂C₆H₃]₂CMe₂, (QCH₂)₂CMe₂ and (QCH₂CH₂)₂S. I were polymer stabilizers, e.g., for polypropylene.

ST polymer cyclic phosphonite stabilizer; polypropylene cyclic phosphonite stabilizer; chlorodibenzoxaphosphorine polyol esterification; diol esterification chlorodibenzoxaphosphorine

IT Polymers, uses and miscellaneous

RL: USES (Uses)

(stabilizers for, cyclic phosphonites as)

IT 9003-07-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(cyclic-phosphonite stabilizers for)

IT 22749-43-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(esterification of, with dihydroxyalkanes and -arenes)

IT 73269-03-1P 73269-04-2P 73269-05-3P 73269-06-4P

73269-07-5P 73269-08-6P 73274-19-8P 73284-38-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and polymer-stabilizing activity of)

IT 79-96-9 88-58-4 111-48-8 118-82-1 126-30-7 629-11-8 903-19-5

52785-98-5

RL: RCT (Reactant); RACT (Reactant or reagent)

IT 73269-04-2P 73269-05-3P 73274-19-8P

RN 73269-04-2 HCAPLUS

RN 73269-05-3 HCAPLUS

[illegible]

RN 73274-19-8 HCAPLUS

=> b uspatall

FILE 'USPATFULL' ENTERED AT 12:13:01 ON 19 SEP 2005

CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 12:13:01 ON 19 SEP 2005

CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

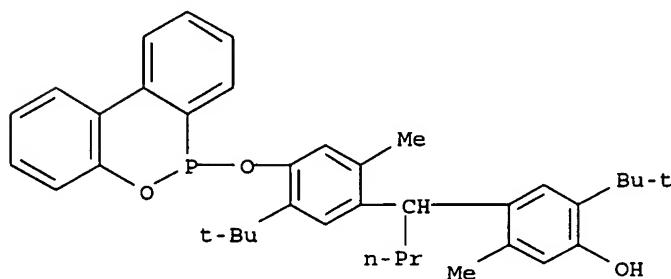
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L20 ANSWER 1 OF 1 USPATFULL on STN
 AN 2004:262100 USPATFULL
 TI Phenolic group-containing phosphonite compound and process for making the same
 IN Lin, Erica, Taipei City, TAIWAN, PROVINCE OF CHINA
 Su, Ching-Yie, Taipei City, TAIWAN, PROVINCE OF CHINA
 PI US 2004204602 A1 20041014
 AI US 2003-618744 A1 20030715 (10)
 PRAI TW 2003-92108102 20030409
 DT Utility
 FS APPLICATION
 LREP Joseph W. Berenato, III, Liniak, Berenato & White, LLC, Suite 240, 6550 Rock Spring Drive, Bethesda, MD, 20817
 CLMN Number of Claims: 18
 ECL Exemplary Claim: 1
 DRWN No Drawings
 LN.CNT 406
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB A phenolic group-containing phosphonite compound has the following formula (I) ##STR1##

wherein R.sub.1, R.sub.2, R.sub.3, R.sub.4, R.sub.5, and R.sub.6 independently of one another are hydrogen or C.sub.1-C.sub.18 alkyl, n and m are integer numbers ranging from 1 to 3, and the sum of n and m ranges from 2 to 4, and X is sulfur or C.sub.1-C.sub.8 alkylene which may be optionally substituted with at least one C.sub.1-C.sub.6 alkyl if the sum of n and m is 2, is a trivalent moiety of C.sub.3-C.sub.7 aliphatic group if the sum of n and m is 3, and is a tetravalent moiety of C.sub.4-C.sub.10 aliphatic group if the sum of n and m is 4.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 773105-02-5P
 (phenolic group-containing phosphonite compound stabilizer for polymers)
 RN 773105-02-5 USPATFULL
 CN Phenol, 4-[1-[4-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-5-(1,1-dimethylethyl)-2-methylphenyl]butyl]-2-(1,1-dimethylethyl)-5-methyl-(9CI) (CA INDEX NAME)



IT 773105-02-5P
 (phenolic group-containing phosphonite compound stabilizer for polymers)

=> d bib abs hitstr l21 tot

L21 ANSWER 1 OF 7 USPATFULL on STN
 AN 2005:118518 USPATFULL
 TI Method for preparing a biphenylphosphonate compound
 IN Su, Wen-Chiung, Taipei City, TAIWAN, PROVINCE OF CHINA
 Sheng, Chin-Shang, Longtan Township, TAIWAN, PROVINCE OF CHINA
 PA Chung Shan Institute of Science & Technology, Lungtan, TAIWAN, PROVINCE OF CHINA (non-U.S. corporation)
 PI US 2005101793 A1 20050512

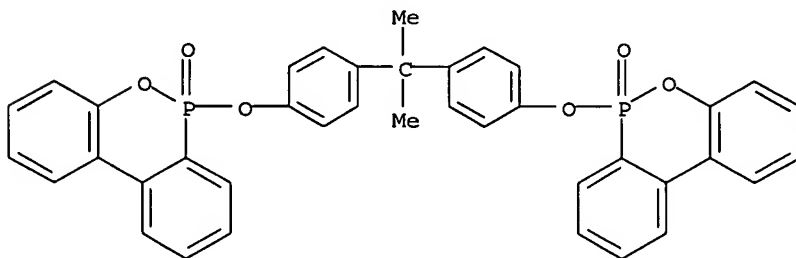
AI US 2004-972396 A1 20041026 (10)
 PRAI TW 2003-92131729 20031112
 DT Utility
 FS APPLICATION
 LREP BACON & THOMAS, PLLC, 625 SLATERS LANE, FOURTH FLOOR, ALEXANDRIA, VA,
 22314, US
 CLMN Number of Claims: 14
 ECL Exemplary Claim: 1
 DRWN No Drawings
 LN.CNT 302

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for preparing a biphenylphosphonate compound of the following formula (I): ##STR1## wherein n is 2 or 3; Ar is a C.sub.6-C.sub.16 aromatic group; which comprising (a) reacting an o-phenylphenol with a phosphorus trichloride in the presence of a zinc chloride catalyst to form a 6-chloro-6H-dibenz [c,e] [1,2] oxaphosphorin of the following formula (II); ##STR2## (b) reacting a polyhydroxybenzene compound of the formula (III) (HO).sub.n--Ar (III) wherein n and Ar are defined the same as the above, with the compound of formula (II) to form a compound of the following formula (IV) ##STR3## wherein n and Ar are defined the same as the above; and (c) oxidizing the compound of formula (IV) in the presence of water and ozone to form the compound of formula (I).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 847452-98-6P
 (preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)
 RN 847452-98-6 USPATFULL
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, 6,6'-dioxide (9CI) (CA INDEX NAME)



L21 ANSWER 2 OF 7 USPATFULL on STN
 AN 2002:217201 USPATFULL
 TI Catalyst comprising a complex of a metal of subgroup VIII, on the basis of a phosphonite ligand and method for hydroformylation
 IN Maas, Heiko, Schifferstadt, GERMANY, FEDERAL REPUBLIC OF
 Paciello, Rocco, Bad Durkheim, GERMANY, FEDERAL REPUBLIC OF
 Roper, Michael, Wachenheim, GERMANY, FEDERAL REPUBLIC OF
 Fischer, Jakob, Kirchdorf, GERMANY, FEDERAL REPUBLIC OF
 Siegel, Wolfgang, Limburgerhof, GERMANY, FEDERAL REPUBLIC OF
 PA BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL REPUBLIC OF
 (non-U.S. corporation)
 PI US 6440891 B1 20020827
 WO 9946044 19990916
 AI US 2000-623175 20000829 (9)
 WO 1999-EP1597 19990311
 20000829 PCT 371 date
 PRAI DE 1998-19810794 19980312
 DT Utility
 FS GRANTED

EXNAM Primary Examiner: Lambkin, Deborah C.
 LREP Keil & Weinkauff
 CLMN Number of Claims: 8
 ECL Exemplary Claim: 1
 DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
 LN.CNT 530

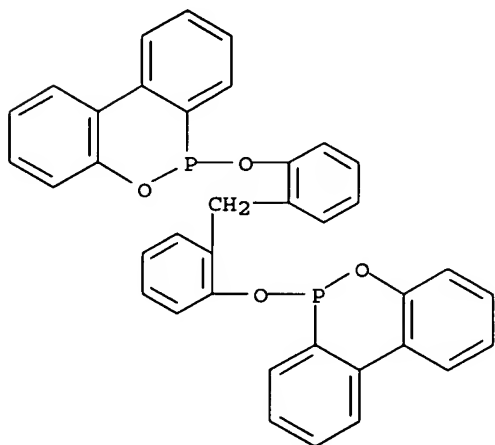
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The catalyst comprises at least one bi- or more highly dentate phosphonite ligand of the general formula I ##STR1##

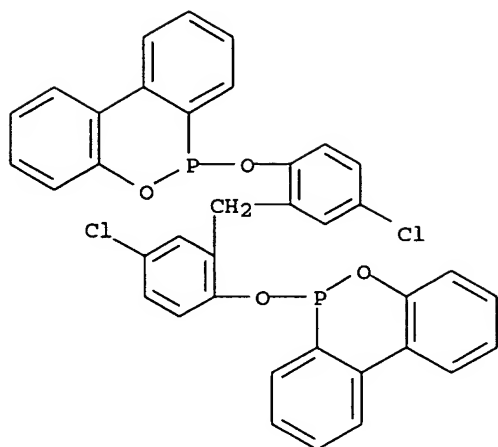
or salts and mixtures thereof and is useful in a process for hydroformylating compounds containing at least one ethylenically unsaturated double bond by reaction with carbon monoxide and hydrogen.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

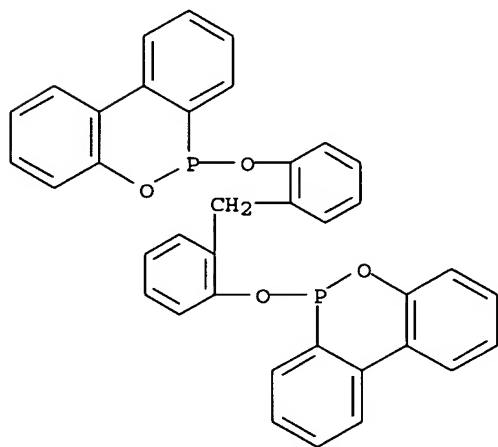
IT 214120-52-2DP, Group VIII metal complexes 221525-10-6P
 (preparation of hydroformylation catalysts comprising a complex of a Group VIII metal and a multidentate phosphonite ligand)
 RN 214120-52-2 USPATFULL
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis(2,1-phenyleneoxy)]bis-(9CI) (CA INDEX NAME)



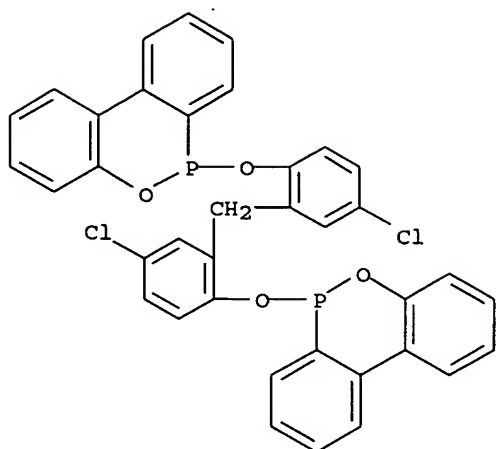
RN 221525-10-6 USPATFULL
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-phenylene)oxy]]bis- (9CI) (CA INDEX NAME)



IT 214120-52-2D, Group VIII metal complexes 221525-10-6D,
 Group VIII metal complexes
 (preparation of hydroformylation catalysts comprising a multidentate
 phosphonite ligand)
 RN 214120-52-2 USPATFULL
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis(2,1-phenyleneoxy)]bis-
 (9CI) (CA INDEX NAME)



RN 221525-10-6 USPATFULL
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-
 phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



L21 ANSWER 3 OF 7 USPATFULL on STN

AN 2001:134198 USPATFULL

TI Catalyst comprising at least one nickel(0) complex based on a phosphonite ligand, and the preparation of nitriles

IN Fischer, Jakob, Kirchdorf, Germany, Federal Republic of Siegel, Wolfgang, Limburgerhof, Germany, Federal Republic of

PI US 2001014647 A1 20010816

US 6355833 B2 20020312

AI US 2001-782762 A1 20010214 (9)

RLI Division of Ser. No. US 2000-508051, filed on 7 Mar 2000, PENDING A 371 of International Ser. No. WO 1998-EP5733, filed on 9 Sep 1998, UNKNOWN

PRAI DE 1997-19740180 19970912

DT Utility

FS APPLICATION

LREP Herbert B. Keil, KEIL & WEINKAUF, 1101 Connecticut Avenue, N.W., WASHINGTON, DC, 20036

CLMN Number of Claims: 15

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 1167

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A catalyst comprising at least one nickel(0) complex which comprises at least one mono-, bi- or multidentate phosphonite ligand of the formula I ##STR1##

or salts and mixtures thereof, is prepared as described, and the catalysts are used to prepare mixtures of monoolefinic C.sub.5 mononitriles with nonconjugated C.dbd.C and C.tbd.N bonds by catalytic hydrocyanation of butadiene or of a 1,3-butadiene-containing hydrocarbon mixture in the presence of a catalyst of this type.

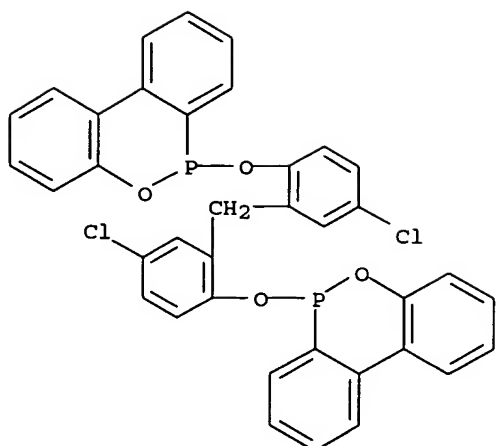
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 221525-10-6P

(potential intermediate; preparation of nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)

RN 221525-10-6 USPATFULL

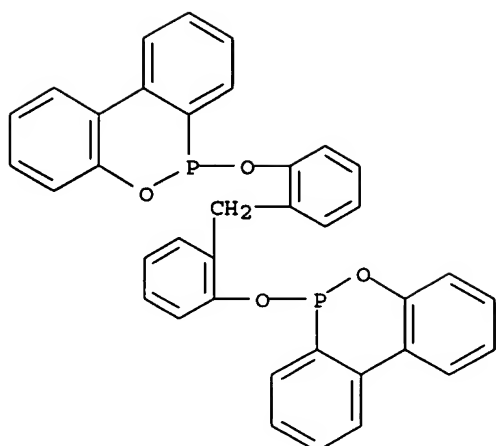
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-phenylene)oxy]]bis- (9CI) (CA INDEX NAME)



L21 ANSWER 4 OF 7 USPATFULL on STN
 AN 2001:117225 USPATFULL
 TI Process for producing aldehydes
 IN Urata, Hisao, Yokohama, Japan
 Wada, Yasuhiro, Yokohama, Japan
 PA Mitsubishi Chemical Corporation, Tokyo, Japan (non-U.S. corporation)
 PI US 6265620 B1 20010724
 WO 9843935 19981008
 AI US 1999-381629 19990927 (9)
 WO 1998-JP1362 19980326
 19990927 PCT 371 date
 19990927 PCT 102(e) date
 PRAI JP 1997-75530 19970327
 JP 1997-75536 19970327
 DT Utility
 FS GRANTED
 EXNAM Primary Examiner: Padmanabhan, Sreeni
 LREP Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
 CLMN Number of Claims: 38
 ECL Exemplary Claim: 1
 DRWN No Drawings
 LN.CNT 1176
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB Aldehydes are produced by reacting an olefinic compound with carbon monoxide and hydrogen in the presence of a catalyst containing a metal of Group 8 to 10 and a phosphonite compound as a trivalent organic phosphorus compound.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 214120-52-2
 (process for producing aldehydes)
 RN 214120-52-2 USPATFULL
 CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis(2,1-phenyleneoxy)]bis-
 (9CI) (CA INDEX NAME)



L21 ANSWER 5 OF 7 USPATFULL on STN
 AN 2001:82958 USPATFULL
 TI Catalyst comprising at least one phosphonite ligand based nickel (0)
 complex and method for the production of nitriles
 IN Fischer, Jakob, Kirchdorf, Germany, Federal Republic of
 Siegel, Wolfgang, Limburgerhof, Germany, Federal Republic of
 PA BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal Republic of
 (non-U.S. corporation)
 PI US 6242633 B1 20010605
 WO 9913983 19990325
 AI US 2000-508051 20000307 (9)
 WO 1998-EP5733 19980909
 20000307 PCT 371 date
 20000307 PCT 102(e) date
 PRAI DE 1997-19740180 19970912
 DT Utility
 FS Granted
 EXNAM Primary Examiner: McKane, Joseph K.; Assistant Examiner: Solola, Taofiq
 A.
 LREP Keil & Weinkauff
 CLMN Number of Claims: 17
 ECL Exemplary Claim: 1
 DRWN No Drawings
 LN.CNT 1214
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB A catalyst comprising at least one nickel(0) complex which comprises at
 least one mono-, bi- or multidentate phosphonite ligand of the formula I
 ##STR1##

or salts and mixtures thereof, is prepared as described, and the
 catalysts are used to prepare mixtures of monoolefinic C.sub.5
 mononitriles with nonconjugated C.dbd.C and C.tbd.N bonds by catalytic
 hydrocyanation of butadiene or of a 1,3-butadiene-containing hydrocarbon
 mixture in the presence of a catalyst of this type.

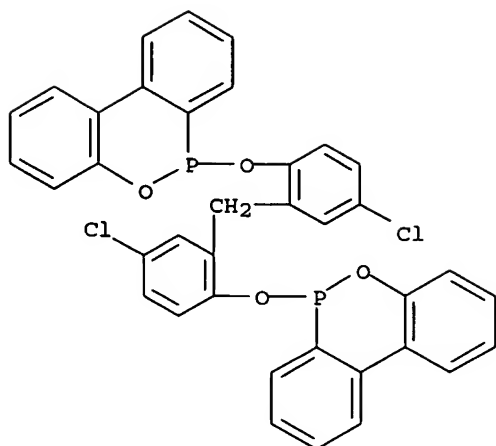
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 221525-10-6P

(potential intermediate; preparation of nickel complex catalyst having a
 cyclic phosphonite ligand for hydrocyanation of butadienes)

RN 221525-10-6 USPATFULL

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-
 phenylene)oxy]]bis- (9CI) (CA INDEX NAME)



L21 ANSWER 6 OF 7 USPATFULL on STN

AN 80:4406 USPATFULL

TI Cyclic phosphonite stabilizers

IN Rasberger, Michael, Riehen, Switzerland

Spivack, John D., Spring Valley, NY, United States

PA Ciba-Geigy Corporation, Ardsley, NY, United States (U.S. corporation)

PI US 4185006 19800122

AI US 1978-922394 19780706 (5)

DT Utility

FS Granted

EXNAM Primary Examiner: Schain, Howard E.; Assistant Examiner: White, R. A.

LREP Cavalieri, Vincent J.

CLMN Number of Claims: 9

ECL Exemplary Claim: 1,7

DRWN No Drawings

LN.CNT 461

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB New phosphonites of the formula ##STR1## wherein R.sub.1 and R.sub.2 independently of one another are a substituted or unsubstituted hydrocarbon radical, or halogen,

x and y independently of one another are 0, 1, 2 or 3,

n is 2, 3, 4, 5 or 6, and

R.sub.3 is a n-valent substituted or unsubstituted aliphatic, alicyclic, aromatic, araliphatic or heterocyclic hydrocarbon residue as stabilizers for organic materials.

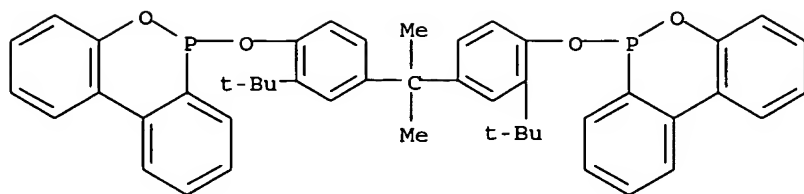
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 73269-04-2P 73269-05-3P 73274-19-8P

(preparation and polymer-stabilizing activity of)

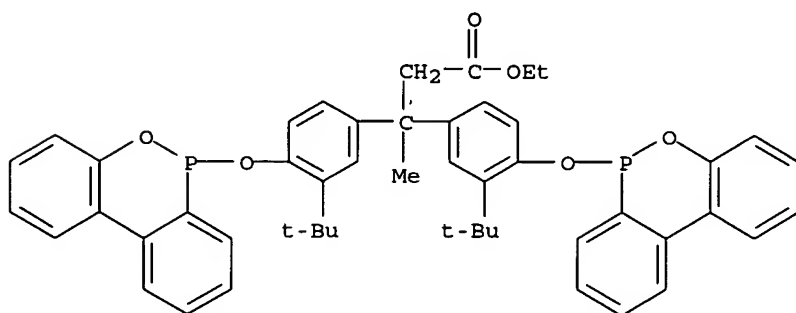
RN 73269-04-2 USPATFULL

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[(1-methylethylidene)bis[[2-(1,1-dimethylethyl)-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



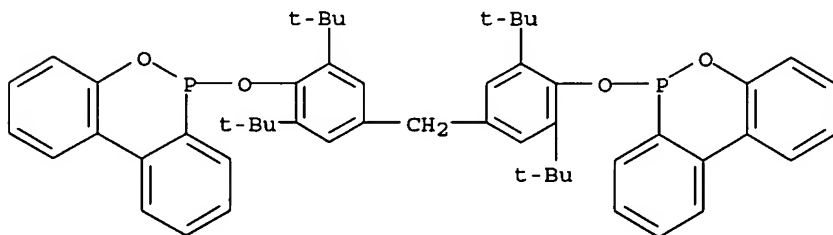
RN 73269-05-3 USPATFULL

CN Benzenepropanoic acid, 4-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-β-[4-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-3-(1,1-dimethylethyl)phenyl]-3-(1,1-dimethylethyl)-β-methyl-, ethyl ester (9CI) (CA INDEX NAME)



RN 73274-19-8 USPATFULL

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[[2,6-bis(1,1-dimethylethyl)-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



L21 ANSWER 7 OF 7 USPAT2 on STN

AN 2001:134198 USPAT2

TI Catalyst comprising at least one nickel(0) complex based on a phosphonite ligand, and the preparation of nitriles

IN Fischer, Jakob, Kirchdorf, GERMANY, FEDERAL REPUBLIC OF

Siegel, Wolfgang, Limburgerhof, GERMANY, FEDERAL REPUBLIC OF

PA BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)

PI US 6355833 B2 20020312

AI US 2001-782762 20010214 (9)

RLI Continuation of Ser. No. US 508051, now patented, Pat. No. US 6242633

PRAI DE 1997-19740180 19970912

DT Utility

FS GRANTED

EXNAM Primary Examiner: Solola, T. A.

LREP Keil & Weinkauff

CLMN Number of Claims: 6

ECL Exemplary Claim: 1

DRWN 0 Drawing Figure(s); 0 Drawing Page(s)

LN.CNT 1115

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A catalyst comprising at least one nickel(O) complex which comprises at least one mono-, bi- or multidentate phosphonite ligand of the formula I
##STR1##

or salts and mixtures thereof, is prepared as described, and the catalysts are used to prepare mixtures of monoolefinic C.sub.5 mononitriles with nonconjugated C.dbd.C and C.tbd.N bonds by catalytic hydrocyanation of butadiene or of a 1,3-butadiene-containing hydrocarbon mixture in the presence of a catalyst of this type.

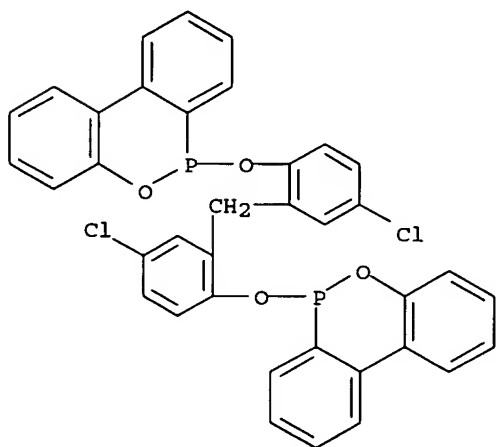
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 221525-10-6P

(potential intermediate; preparation of nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)

RN 221525-10-6 USPAT2

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-phenylene)oxy]]bis- (9CI) (CA INDEX NAME)



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